

# **Gulf Research Reports**

**Volume 1, Number 2**

**Ocean Springs, Mississippi**

**April, 1962**

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The Fauna and Flora of Horn Island, Mississippi

E. Avery Richmond

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# **Gulf Research Reports**

**Volume 1, Number 2**

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A JOURNAL DEVOTED PRIMARILY TO  
PUBLICATION OF THE DATA OF THE  
MARINE SCIENCES, CHIEFLY OF THE  
GULF OF MEXICO AND ADJACENT  
WATERS.

GORDON GUNTER, *Editor*

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The Fauna and Flora  
of  
Horn Island, Mississippi

*by*

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GULF COAST RESEARCH LABORATORY

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## I. INTRODUCTION

From 26 February 1944 until 4 February 1945, I was stationed with the U. S. Army on Horn Island, Mississippi, and decided to observe and record the animals and plants existing there. At the time, it seemed that little attention had been devoted to the wildlife of this island, but eventually it became apparent that some studies had been made. However, many of the observations have not been published and many of the records of the flora and fauna living on and around the island are scattered and unavailable. The most outstanding papers include those of Lloyd and Tracy (1901), Lowe (1921), and Pessin and Burleigh (1941). Cook (1942, 1943 a and b) described several of the animals observed. Smith and List (1955) recorded a number of amphibians and reptiles which were collected on Horn Island.

Since 1945 more attention has been paid to this subject. Kopman (1946) enlightened the public regarding the seasonal activity of the animals and changing conditions in the Mississippi Sound region in his delightful "Wild Acres," a book of the Gulf Coast country. From 1940 on many scientists and students of the Gulf Coast Research Laboratory visited Horn Island, but still comparatively little has been published. Rings and Richmond (1953) presented a brief survey on the mosquitoes collected by them during 1944 and 1945; the species listed by them, together with two additional ones, are included in this paper.

The animals and plants actually collected or observed on Horn Island are listed in Part IV. Besides those collected by myself, species reported by other investigators are included. Longer study and more intensive collecting would doubtless result in many additions to the fauna and flora as known at present.

This study was not sponsored by any organization, and the expense and time devoted to it were contributed chiefly by myself. However, I was in the service of the U. S. Army during the first year of the study, and subsequently Dr. Gordon Gunter, director of the Gulf Coast Research Laboratory at Ocean Springs, Mississippi, granted me the privilege of living and working there, as an honorary member of the staff. Doctor Gunter also reviewed this contribution and gave me some helpful suggestions. Finally, many facilities at the U. S. National Museum and at the Academy of Natural Sciences at Philadelphia were placed at my disposal. Records of many of the more primitive invertebrates were taken from a manuscript check-list of the marine fauna of Mississippi Sound which has been maintained at the Gulf Coast Research Laboratory since 1950. Such specimens are in a reference collection at the Laboratory. The species on this list reported from Horn Island or vicinity were kindly checked for me by Dr. H. J. Bennett. Mrs. Clara LeGear of the Library of Congress was helpful in locating important maps.

I am greatly indebted to the specialists named below for assistance in the identification of species in the following groups: Mollusca (R. Tucker Abbott and Donald R. Moore); Pisces (Henry W. Fowler and J. Y. Christmas); Aves (T. D. Burleigh and John R. Walther); and Arthropoda (W. H. Anderson, R. H. Arnett, P. D. Ashlock, H. S. Barber, R. E. Blackwelder, L. L. Buchanan, W. D. Burks, J. S. Caldwell, H. W. Capps, O. L. Cartwright, E. A. Chapin, J. F. G. Clark, R.

E. Crabill, C. J. Drake, W. D. Fields, Oliver S. Flint, Jr., R. H. Foote, A. B. Gahan, C. T. Greene, A. B. Gurney, C. Heinrich, M. T. James, J. P. Kramer, K. V. Krombein, T. B. Mitchell, C. F. W. Muesebeck, P. W. Oman, Miss Sophy Parfin, L. M. Russell, C. W. Sabrosky, R. I. Sailer, M. R. Smith, T. E. Snyder, P. J. Spangler, Alan Stone, E. L. Todd, H. K. Townes, G. B. Vogt, Miss Luella Walkley, R. E. Warner, and W. W. Wirth — most of them on the staffs of either the U. S. National Museum or the Agricultural Research Administration).

The insects sent to the National Museum were deposited in its collection or, if not of major interest, returned to me. Most of the specimens that were returned were given to the University of Massachusetts or to Cornell University. The Tipulidae were identified by Charles P. Alexander, and the specimens are in his private collection at Cranefly Haven, Amherst, Massachusetts. A number of Coleoptera were sent to Henry Dietrich and were deposited in the Cornell University insect collection. The Hydrophilidae, Dytiscidae, Haliphidae, and Gyrinidae were determined by Paul J. Spangler of the U. S. National Museum or myself and given to the National Museum. The arrangement of the Lepidoptera is in keeping with the opinion of Mr. Bryant Mather of Jackson, Mississippi. The mollusks and three fish, identified by Abbott and Fowler, respectively, were deposited at the Academy of Natural Sciences of Philadelphia. Fred Aldrich, formerly assistant curator of Limnology at the Academy of Natural Sciences of Philadelphia, was helpful in the naming of the species in his particular field.

The plants were identified by Philip A. Munz of Claremont, California, R. B. Channell of Vanderbilt University, Nashville, Tennessee and myself. Most of the plants were placed in the Bailey Hortorium where Doctor Munz was the assistant curator at the time material was sent to him for identification. My appreciation is extended to C. E. Woods, Jr., of the Gray Herbarium at Harvard University, for his courtesy in allowing the use of his tentative classification of plants, and to G. W. Johnston, professor of botany, and Sidney McDaniels, of State College, Mississippi, for permission to examine the Lowe Collection.

## II. DESCRIPTION OF THE ISLAND

Lloyd and Tracy (1901), Pessin and Burleigh (1941, 1944), Rings and Richmond (1953), and Moore (1961) contributed information regarding the location, size, soil types, climate, ecology, fauna, and flora of the insular group whose components are Dauphin, Petit Bois, Horn, Ship, and Cat Island. They separate the Mississippi Sound from the Gulf of Mexico. The Sound is about eighty miles long by ten miles wide. Three rivers, (the Pearl to the west, the Pascagoula and the Alabama to the east) supply fresh water to the Sound, thus diluting the salt water which flows in between the barrier islands from the Gulf. So, as Priddy *et al.* (1955) state, "the Sound is a gigantic mixing bowl for animal and plant life." It has been assumed by geologists that these islands were formerly a part of the mainland, and that the present water areas were formed by a sinking of the land (McGee 1891). However, others believe that the islands were built up some five or six thousand years ago after the sea level became stabilized at or near its present height (Moore 1961).



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This paper primarily concerns only Horn Island, although the barrier islands have a great deal in common and possess many structural characteristics and wildlife species which are fundamentally the same. Lloyd and Tracy did not deal specifically with Horn Island, but many of their remarks are worth noting. Figures 1 through 3 show the relation of these islands to the mainland and to each other, a detailed drawing of Horn Island itself, and the area assigned as a refuge of the Fish and Wildlife Service.

Horn Island is approximately thirteen miles in length and varies from one-fourth to three-fourths of a mile in width. Both ends gradually taper to sandy points. These points are practically devoid of plants. Figures 4-9, inclusive, show characteristic areas of the island's shoreline. The terrain in general is low and sandy except for the longitudinal central portion, which is slightly higher in elevation and covered irregularly by small groves of slash pine (*Pinus Elliottii* Engelm). Figure 10 is a photograph of a young slash pine. Some of these pines are at least 200 years old. Other elevated areas are evidently due to the formation of sand dunes, which in some areas reach an altitude of 30 to 40 feet, and even cover the live oaks and pines nearly to their tops (figs. 21 and 22). Several large lagoons, ponds, and swamps (figs. 2, 12, 14, 16, 17, 18, 19 and 25) are present; the former two types of water areas are usually surrounded by marshes. Narrow-leaved cattails occur in several of the swamp-lands. (figs. 2, 13, and 20).

The climate is mild with a mean temperature of 52.9° F. in winter, and 80.7° in summer (Pessin and Burleigh 1941). However, in the fall and winter, it can be very chilly, especially when a strong westerly or northwesterly breeze is blowing, and the summer months can be very hot in the absence of winds.

The annual rainfall varies from approximately 50 to 70 inches with a mean of 58 inches (Pessin and Burleigh 1941). One heavy rain-storm in the summer of 1944 brought an exceptional downfall of 13.5 inches from midnight to 11:30 A. M. Figures 23 and 24 show an area before and after a heavy rain. The prevailing winds are southerly with occasional periods of northerly winds. August and September are the months when hurricanes are wont to arrive in the Gulf from the Caribbean Sea.

According to observations conducted by Humm and Caylor (1957) in their study of summer marine flora, the temperature in the Sound varies from 28° to 32° C. between June 1 and September 1. It is naturally higher in shallow water and slightly lower along the bottom. They state that there is considerable stratification even in shallow water and that it is therefore difficult to present precise temperature data. The salinity in the Sound was 20 to 32‰, differing from that in the Gulf, which has a salinity of 34.88 to 36.19‰ (Leiper 1954). Moore (1961) gave salinities taken monthly from December 1956 to June 1957 at three stations across the Sound from the Bay of Biloxi to Dog Keys Pass. The mean salinity during this period, including both surface and bottom, was 22.2 *per mille*. The mean water temperature at the same stations was 19.7° C. The mean range of the tide in the Sound is 1.9 feet.

Pessin and Burleigh (1941) consider four soil types to be characteristic of the island: dune sand, tidal marsh, beach sand, and "pine

timber." Along the south (Gulf) and north (Sound) coasts, dune and beach sands form the principal soils. Lloyd and Tracy (1901) call Horn Island a sand island as contrasted with a muck marsh or mud lump island. The origin of the underlying soil is probably due to the same causes as that of a muck marsh, but it is now covered for the most part by sand. Such muck or clay originated from the Mississippi and Pearl Rivers and doubtless also from the Pascagoula and Alabama Rivers. The bottoms of the lagoons are mucky. In the interior of the Island there are many depressions, some of which are inhabited by dune plants and others by marsh vegetation. In both of these areas, fine sand is present. This type of soil consists of fine, dark gray sand covering white moist sand, which is only a few centimeters deep. In some places the elevation is so low that the soil is constantly wet and forms sand marshes, while in other places the surfaces are raised from one to three meters or more.

All of the offshore islands are moving to the northwest in the direction of the prevailing winds. During the equinoctial storms of 1960, Horn Island was shortened by about one-half of a mile on the east, whereas the west end increased about one-quarter of a mile. The acreage of the Island was estimated to be approximately 3700 acres in 1956. This is a loss of about 300 acres since 1944.

The greatest variety of flora is found on the larger islands, such as Horn, since they have the greatest variety of soil and variation in the elevation. Penfound and O'Neill (1934), in their treatment of the vegetation of Cat Island, contribute much information concerning the physiography of the islands. Priddy *et al.* (1955) discuss the sediments of the Sound and shore waters.

### III. HISTORICAL DATA

A "Historical Sketch of the Explorations in the Gulf of Mexico" was prepared by Paul S. Galtsoff (1954). His paper covers the explorations of Europeans (principally Spanish, French, Portuguese and English. Eleven maps are reproduced, beginning with a portion of a world map by Johannes Ruysch from Ptolemy's geography of 1507-1508. D'Anville's Map of Louisiana, drawn in 1732, is not published in Galtsoff's paper; however, fig. 1-B of this paper presents a portion of it. A 1731 French chart of the Islands of America and adjacent countries is included in Cumming's "Southeast in Early Maps" (1958). The barrier islands are not depicted. Cumming also shows an anonymous map of the northern Gulf coast including Florida to Mississippi and westward. This was copied from a 1544 manuscript by DeSoto, and indicates the territory over which he travelled from Florida to the Mississippi River.

Presumably the first map, summarizing the discoveries in the "western ocean" and showing the Gulf of Mexico, was drawn about 1500 by Juan de la Cosa, the companion and pilot of Christopher Columbus. Cabeza de Vaca, a companion of Panfilo de Narváez, found refuge on a small island, after Narváez had perished in a 1528 storm. This island, 5 leagues long and 2 leagues wide, he names Isla de Malhada. According to Galtsoff (1954), this may have been Horn Island.

Amerigo Vespucci in 1497 is usually credited with being the first European explorer to sail along the coast of America including the

Gulf, but this story has been questioned. Bremer in 1940 advanced the theory that Gasper Corte Viall should have the credit, since he spread the news of the existence of a new continent on his return to Portugal just prior to 1500. He cited an area on the northern coast of the Gulf as a landing place of some Portuguese sailors.

Considerable search has revealed comparatively little information concerning the part man played in the early history of Horn Island. This is not the case with several of the neighboring islands, such as Dauphin, Ship, and Cat Islands. A temple with a perpetual flame was common to many Indian tribes of the lower Mississippi River and Rayford (1956) reports that Indians had such a temple on Dauphin. In later years pirates evidently frequented this area as well as the entire Sound or Lake as it was then called. Little mention is made of Petit Bois, called Petty Boy by the residents, except as to its topography. The only remarks by Rayford concerning Horn refer to a time when the Battleship Mississippi stood off Pascagoula in "1906," not in the Sound but in the Gulf, and a few words relative to the 1906 hurricane. The Mississippi drew 22 feet and since Horn Island Pass was only 20 feet deep, the battleship could not enter the Sound. Lee Bosarge, a well-known fisherman, was at Horn Island when the first evidences of the 1906 hurricane became visible, and as it was approaching rapidly, Bosarge decided to make for Pascagoula. However, he thought of Nelson, the lighthouse keeper, and went to the Horn Island Light, located in the Gulf near the east end of the island. Unable to persuade Nelson to leave the Light, he hurriedly set out for the mainland and barely made it before the storm. Nelson, his wife, and daughter were lost and the entire lighthouse was blown away. The Light was replaced later at a spot east of Horn and north of Petit Bois.

The earliest information concerning the presence of humans on the islands, with the exception of the remarks given in the previous paragraphs, stems from two excellent publications written by C. E. Cain (1953 and 1954): "Four Centuries on the Pascagoula," and "Flags Over Mississippi." Cain does not write about Horn Island, but he prefaces the more recent knowledge of this area by a chronological outline of the activities of the Pascagoula River country. In 1699, a French-Canadian by the name of Pierre le Moyne d'Iberville, who had sailed from France on September 28, 1698, broke ground on April 8, 1699 for the construction of Fort Maurepas at Old Biloxi (Ocean Springs). On May 3, 1699, Iberville sailed for France but returned later. His brother, Sieur Bienville, was left as King's Lieutenant.

Rowland (1925) states that Bienville with five men explored the Pascagoula River and Bay in two bark canoes. They discovered Masacre Island (Dauphin) which he named Dolphin because a dead dolphin had been found on the beach. From there he turned west and found another island south of Round Island. This island he called Horn, owing to the fact that one of his men had lost a powder horn there. They paddled farther west to Ship Island and finally returned to Fort Maurepas. Bienville won the decoration of the Cross of St. Louis and a royal patent granting him Horn Island as a reward for the eminent services which he had rendered the colony.

McWilliams (1953) in a map opposite page 236 of his book, shows Horn Island as Isle Bienville. Guillaume Delisle was the probable

cartographer in 1718 (fig. 1-A). Isle Bienville was evidently used from 1717, when Bienville was granted Horn Island, until sometime later. Devin in 1719 and Serigny in 1720 still called the Island, Bienville, but D'Anville in 1732 (fig. 1-B) uses Horn. It should be noted that Petit Bois is not shown on these early maps and was possibly part of Dauphin at the time.

From 1732 until 1845, no definite data appears to be available. Many old timers and residents of Pascagoula, Gautier, Ocean Springs, Biloxi and Gulfport were interviewed, but with no avail. Doubtless, many folk of different nations (Spain, France, England, Portugal, etc.) roamed the islands, the Sound and the Gulf, but most of Horn Island history appears to have been lost. It seems logical to suppose that the Island was in a wild state and not conducive to habitation. In comparison to the other islands, it was quite a trip from the mainland. Records do not indicate that any wild animals especially abounded there, although it evidently teemed with alligators, cottonmouths, and perhaps copperheads. Since it is generally believed that Indians did not like to travel long distances on water, the Biloxis, Pascagoulas and Mictobis, reportedly about 1,000 strong, stayed close to the mainland.

Excellent fishing and shrimping in the Sound lured many to this area, and some folk may have strayed off the beaten path or been forced to land on Horn. Buttons of Union Army uniforms have been found in the sand and some military men were buried there at the time of the Civil War. It would seem logical that explorers besides Bienville or scientists may have been led to investigate the island in the old days. However, they might have been frightened off by men of ill repute, hiding and attempting to get a living from this wilderness. According to Harper (1958), William Bartram passed by Horn Island when traversing the Sound in "1777" (=1775) but did not visit it.

Horn Island was and still is frequently buffeted by severe storms, tidal waves, and hurricanes. The most important storms are equinoctial. These and other notable climatic disturbances occurred in 1717, 1721, 1723, 1733, 1740, 1746, 1772, 1813, 1817, 1819, 1832, 1833, 1852, 1860, 1893, 1906, 1916, 1947 and 1960. Occasional water spouts have been observed in both the Gulf and the Sound.

A family named Waters lived on Horn Island from 1845 to about 1920, and raised cattle. I interviewed their descendants in Pascagoula. Their house was not far from the middle of the Island and near the Sound. The severe hurricane of 1906, during which Horn Island was nearly covered by water destroyed the Waters' records and about one-half of the cattle. Only a pillar, bricks, and parts of a stove reveal where the Waters' house once stood just north of Pond E (fig. 2). In 1945, a dilapidated building was still standing to the south of the west end of Lagoon C (fig. 2). This was used as a clubhouse for sportsmen who fished and hunted.

During the 19th century some pines were chipped for resin, and it was distilled on the Island for turpentine. Lumber (mostly square timber, 16 x 16 inches), cut at Moss Point and Pascagoula was held off Horn in the Sound until ships could pick it up. At times, as many as 20 to 30 rafts were anchored along the Sound side, awaiting the arrival of sail-boats or small two-masted schooners from New Orleans

or Mobile. No lumber was cut on the island except by the Waters for personal use. All evidence indicates that during historic times Horn Island has been isolated and populated little or not at all. It has been uninhabited since the Army left in 1945.

For a period in the last two centuries, some quantity of sand was hauled to New Orleans by the Jahncke Dredge Company and others for the manufacturing of glass and for water purification. Such operation was finally prohibited by the Bureau of Land Management. It is reported that a New Orleans leather company skinned quite a sizeable number of alligators in 1923, and used the hides for various leather goods. A farmer, L. S. Feldier, apparently owned some cattle on Horn just previous to World War II.

The Department of the Army acquired Horn Island on March 23, 1943, and building construction was begun June 16, 1943. The principal buildings were erected primarily in the administration, corral and laboratory areas (fig. 2). The laboratories were located not far from the Sound about 8 miles west of the administration area. To solve transportation problems, a company of Seabees built a narrow-gauge railroad from the corral to the laboratory area.

Approximately 2,027 acres were leased from 26 private individuals. The remaining 1,969 acres were acquired on a use permit from the Department of Interior on February 1, 1944. All live-stock and domestic animals, except those used in experimentation, were removed when the Army took over. Some hogs were still present in the spring of 1944 but these were removed soon thereafter. It is reported that hogs are still on the island and that their tracks have been seen, but I have not observed any. The unit was declared excess on August 13, 1945, and all building structures and materials not removed have long since fallen down.

Public Land Order No. 1636 was issued in October 1958, making part of Horn Island a wildlife refuge (fig. 3). The Fish and Wildlife Service of the U. S. Department of the Interior posted their acreage during 1960 to keep away any individuals who might encroach on their property. The "Gulf National Wildlife Refuges" office controls the Horn Island refuge, and John R. Walther with an office at Cadet Point, Biloxi, Mississippi, is in charge.

There is still some question as to the ownership of much of the private land, and neither the federal nor state governments have as yet come up with the answer. To the biologist or conservationist, it would be distinctly regrettable if "development" of the area were to be carried out. The entire island should be made a wildlife refuge.

#### IV. ANIMAL AND PLANT LISTS

The species listed here include only those animals and plants which were actually collected on or in the waters around Horn Island. This list, with the exception of the species reported by others, was obtained from collections made by me in 1944, 1945, and 1959-'61, inclusive. The species recorded by other investigators are credited to them at the end of the lists of the various Phyla or Classes. The methods by which the insects were collected have been described by Rings and Richmond (1953), and the details need not be repeated. A New Jersey light trap was placed at each of the administration, laboratory, and corral areas (fig. 2). Fly traps were

placed in different locations from time to time and baited with miscellaneous materials. One hundred and twenty-nine field trips, exclusive of the fly and light trap collections, were made, principally in 1944, and most of them were devoted to insect collecting. Nevertheless, observations were made regarding other animals as well as plants. Eleven hundred species, 958 animals and 142 plants, are listed in this paper.

Attention should be called to the presence of the imported fire ant. During the summer months, various species of tabanids, sandflies, and stable flies are troublesome to humans. During the war an infestation of bedbugs occurred on the mattress of an officer, and an enlisted man was bitten by an assassinbug (*Triatoma sanguisuga sanguisuga* (Le C.)) while sleeping. The bedbugs were doubtless introduced on bedding from the mainland. In the summer of 1944, many small staphylinids, scolytids, chloropids, chironomids, and ceratopogonids were attracted by the barracks' lights, and they entered in droves through the screens. Aerosol bombs satisfactorily controlled them. An extensive migration of monarch butterflies was observed at the extreme west end of the island on November 7, 1944. Low bushes, herbaceous plants, and debris were completely covered by these butterflies.

No list of Horn Island insects has ever been published with the exception of the mosquitoes (Rings and Richmond, 1953). Gunter and Christmas (1959) collected a corixid, *Trichocorixa verticalis* (Fieber), from offshore plankton in the Gulf and showed that it is a normal component of the plankton. Spilman (1959) included a tenebrionid, *Leichenum canaliculatum variegatum* (Klug), in his distributional list of *Leichenum* species of the United States. Froeschner (1960) described a new species of Cydnidae, and Steyskal (1960), a new species of Sciomyzidae. Wilson (1958) collected *Mesovalia mulsanti bisignata* Jaczewski in brackish pools. All of these species were collected by me in 1944.

The fish list contains many species caught from the shore by myself or other personnel stationed on the island during World War II. J. Y. Christmas' list of fishes, which were seined in the environs of the island, supplements my personal records. A mosquito fish, *Gambusia affinis* (Baird and Girard), was caught by hand in a pool, which was created by a spouting artesian well situated just to the west of the administration area. Many fresh or brackish-water fishes are present in the lagoons and ponds, but no special study has been devoted to them.

Cottonmouths (fig. 27) abound on the island, and a few alligators still frequent the swamps and lagoons. A coachwhip snake was killed on September 20, 1944, by one of the enlisted men. It measured 45½ inches in length. I was interested to observe on September 6, 1944, a chameleon (*Anolis carolinensis* Voigt) trying to capture some living flies in stoppered vials on a laboratory bench.

On January 29, 1959, a King Rail calmly bathed almost at my feet in a pool formed by a spouting artesian well just east of the laboratory area. The bird approached the pool without fear, took its bath, and left without paying the slightest attention to me.

Lincoln (1935, 1950), Hildebrand (1937), Lowery (1945, 1946), Pessin and Burleigh (1941), (Burleigh (1944), Bullis and Lincoln (1952),



Lowery and Newman (1954), and Bullis (1954) all contributed to the knowledge of the birds that frequent the Sound region. Several species of shore birds nest on a sandy area just north of the bathing beach (figs. 2 and 15).

There is a remarkable parallelism of the Horn Island plants with the "pine barren" flora of coastal New Jersey, and with other eastern areas of the Coastal Plain. Pessin and Burleigh (1941) group the plants into marsh and wet-land plants, dry-land plants, lianas, shrubs, trees, and beach plants. The summer marine flora of the Sound was studied and reported on by Humm and Caylor (1957), and the sea grasses of the northern Gulf coast were reported on by Humm (1956). Algae, mosses, liverworts, and ferns were not collected during my study. Pink sundew is especially prevalent in a low region about two miles east of the administration area. Rosemary and groundsel are plants characteristic to the Island (figs. 11 and 26). One species of lichen, *Cladonia rangiferina* (L.) Weber is abundant on live oaks, yaupons, and myrtles. Dead cypress stumps were present near the east end in 1945, but no live cypress was found on the island. The stumps are now in the Gulf.

Most of the plants collected by Lowe (1921) are to be found in the Mississippi State University Herbarium. Some of the plants, which have been collected by R. B. Channell, are at Vanderbilt University, others are at Mississippi State University. Many of the plants which Delzie Demaree collected are in the Gray Herbarium at Harvard University, at Vanderbilt University, and at Mississippi State University, but could not be readily located.

## FAUNA

### Phylum PORIFERA — Sponges

#### *Clionidae*

*Cliona celata* Grant ..... Sulphur Sponge

#### *Haliclonidae*

*Haliclona* sp. .... Deadman Fingers

#### *Microcionidae*

*Microciona prolifera* Verrill ..... Red Sponge

### Phylum COELENTERATA

#### *Astrangiidae*

*Astrangia astreiformis* Milne Edwards and Haime .. Stony Star Coral

#### *Campanulariidae*

*Obelia oxydentata* Steckow ..... Double-branching Hydroid

#### *Hormathiidae*

*Calliactris tricolor* (LeSueur) ..... Common Sea Anemone

#### *Pelagidae*

*Dactylometra quinquecirrha* L. Agassiz ..... Sea Nettle

#### *Renillidae*

*Renilla mulleri* Kölliker ..... Short-stemmed Sea Pansy

#### *Rhizostomidae* (Order Rhizostomae)

*Stomolophus meleagris* L. Agassiz ..... Cabbagehead

#### *Ulmaridae*

<sup>1</sup> *Aurellia aurita* Lamarck ..... Common White Jelly Fish

Phylum CTENOPHORA — Comb Jellies

*Beröidae*

*Beröe ovata* Chamisso and Eisenhardt ..... Oval Comb Jelly

*Nemiidae*

*Mnemiopsis mccradyi* A. Agassiz ..... Sea Walnut

Phylum NEMERTEA — Ribbon Worms

*Lineidae*

*Cerebratulus lacteus* (Leidy) ..... Large Ribbon Worm

*Micrura leidy* (Verrill) ..... Leidy's Ribbon Worm

Phylum BRYOZOA — Moss Animals

*Adeonidae*

*Zoobotryon verticillatum* (della Chiaje) .....

*Bicellariidae*

*Bugula neritina* Linnaeus ..... Treelike Moss Animal

*Membraniporidae*

*Membranipora membranacea* Linnaeus ..... Sea Mat

Phylum CHAETOGNATHA — Arrow Worms

*Sagittidae*

*Sagitta hispida* Conant ..... Hispid Arrow Worm

Phylum ANNELIDA — Segmented Worms

*Arenicolidae*

*Arenicola cristata* Stimpson ..... Bloodworm

*Glyceridae*

<sup>1</sup> *Glycera dibranchiata* Ehlers ..... Proboscis Bloodworm

*Nereidae*

*Nereis pelagica* Linnaeus ..... Reddish Clamworm

*Sabellariidae*

*Sabellaria floridensis* Hartman ..... Hartman's Sabellaria

*Spionidae*

*Nerine agilis* Verrill ..... Clamworm

<sup>1</sup> Species collected by Richmond.

Remainder taken from a Gulf Coast Research Laboratory list.

Phylum MOLLUSCA

Class Pelecypoda — The Clams

*Arcidae* — Ark Shells

<sup>2</sup> *Anadara brasiliiana* (Lamarck) ..... Incongruous Ark

*Anadara ovalis* (Bruguière) ..... Blood Ark

<sup>1</sup> *Anadara transversa* (Say) ..... Transverse Ark

*Arca zebra* Swainson ..... Turkey Wing

<sup>1</sup> *Noetia ponderosa* (Say) ..... Ponderous Ark

*Mytilidae* — Mussels

<sup>4</sup> *Lithophaga bisulcata* d'Orbigny ..... Mahogany Date Mussel

*Pinnidae* — Pen Shells

<sup>4</sup> *Atrina seminuda* (Lamarck) ..... Half-spined Pen Shell

<sup>4</sup> *Atrina serrata* (Sowerby) ..... Saw-toothed Pen Shell

*Plicatulidae* — Plaited Shells

<sup>1</sup> *Plicatula gibbosa* Lamarck ..... Kitten's Paw



- Leptonidae — Leptons**
- <sup>4</sup> *Kellia suborbicularis* (Thomson) ..... Thomson's Lepton  
<sup>4</sup> *Mysella cuneata* Verrill & Bush ..... Cuneate Lepton  
<sup>4</sup> *Mysella planulata* (Stimpson) ..... Atlantic Flat Lepton
- Pectinidae — Scallops**
- Aequipecten gibbus* Linnaeus ..... Calico Scallop  
<sup>1</sup> *Aequipecten irradians concentricus* Say ..... Atlantic Bay Scallop
- Anomiidae — Jingle Shells**
- <sup>1</sup> *Anomia simplex* d'Orbigny ..... Common Jingle Shell
- Ostreidae — Oysters**
- Crassostrea virginica* (Gmelin) ..... Eastern Oyster  
<sup>4</sup> *Ostrea equestris* Say ..... Horse Oyster
- Diplodontidae — Diplodons**
- <sup>2</sup> *Diplodontia punctata* Say ..... Common Atlantic Diplodon
- Lucinidae — Lucines**
- <sup>2</sup> *Lucina amiantus* Dall ..... Lovely Miniature Lucina  
<sup>1/3</sup> *Lucina floridana* Conrad ..... Florida Lucina  
<sup>2</sup> *Lucina multilineata* Tuomey & Holmes ..... Many-lined Lucina  
<sup>2</sup> *Phacoides radians* Conrad ..... Radiate Lucina
- Cardiidae — Cockles**
- <sup>1</sup> *Dinocardium robustum* (Solander) ..... Giant Atlantic Cockle  
<sup>2</sup> *Laevicardium laevigatum* (Linnaeus) ..... Common Egg Cockle  
<sup>3</sup> *Laevicardium mortoni* (Conrad) ..... Morton's Egg Cockle  
<sup>1</sup> *Papyridea soleniformis* (Bruguère) ..... Spiny Paper Cockle  
*Trachycardium egmontianum* (Shuttleworth) ..... Prickly Cockle
- Veneridae — Venus Clams**
- <sup>4</sup> *Anomalocardia cuneimeris* (Conrad) ..... Wedge-shaped Venus  
<sup>2</sup> *Callista eucymata* Dall ..... Glory-of-the-Seas Venus  
<sup>1</sup> *Chione cancellata* (Linnaeus) ..... Cross-barred Venus  
<sup>2</sup> *Chione intapurpurea* Conrad ..... Cribrara Venus  
<sup>4</sup> *Chione grus* Holmes ..... Gray Pygmy Venus
- Crassatellidae — Little Heavy Shells**
- <sup>4</sup> *Crassinella lunulata* Conrad ..... Lunate Crassinella  
<sup>4</sup> *Cuna dalli* Vanatta ..... Moore's Cuna  
<sup>1</sup> *Dosinia discus* Reeve ..... Disk Dosinia  
<sup>1</sup> *Marcrocallista nimboza* (Solander) ..... Sunray Venus  
<sup>2</sup> *Mercenaria campechiensis* (Gmelin) ..... Southern Quahog  
<sup>4</sup> *Parastarte triquetra* (Conrad) ..... 3-Sided Parastarte
- Tellinidae — Tellinas**
- <sup>2</sup> *Macoma brevifrons* Say ..... Short-snouted Macoma  
<sup>2</sup> *Strigilla mirabilis* Philippi ..... White Strigilla  
<sup>2</sup> *Tellina alternata* Say ..... Alternate Tellin  
<sup>2</sup> *Tellina lintea* Conrad ..... Linen Tellin  
<sup>2</sup> *Tellina versicolor* DeKay ..... Cousin Tellin
- Semelidae — Semeles and Abras**
- <sup>2</sup> *Abra aequalis* (Say) ..... Common Atlantic Abra  
<sup>4</sup> *Abra lioca* Dall ..... Dall's Little Abra  
<sup>2</sup> *Semele bellastriata* Conrad ..... Cancellate Semele  
<sup>4</sup> *Semele nuculoides* Conrad ..... Nuculoid Semele
- Donacidae — Wedge Shell**
- <sup>2</sup> *Donax obesus* d'Orbigny ..... Fat Wedge Clam  
<sup>1</sup> *Donax variabilis* Say ..... Coquina Shell

- Macridae — Surf Clams**
- <sup>2</sup> *Labiosa plicatella* (Lamarck) ..... Sailor's Ear
- <sup>3</sup> *Mactra fragilis* Gmelin ..... Fragile Atlantic Mactra
- <sup>2</sup> *Mulinia lateralis* (Say) ..... Dwarf Surf Clam
- <sup>1</sup> *Spisula solidissima* Dillwyn ..... Atlantic Surf Clam
- Solenidae — Razor Clams**
- Ensis minor* Dall ..... Miniature Jack-knife Clam
- Lyonsiidae — Lyonsias**
- <sup>4</sup> *Lyonsia floridana* Conrad ..... Florida Lyonsia
- Teredinidae — Ship Worms**
- Teredo navalis* Linnaeus ..... Ship Worm
- Class Pteropoda**
- Aplysidae — Sea-hares**
- <sup>4</sup> *Aplysia willcoxi* Heilprin ..... Willcox's Sea-hare
- Arminidae — Nudibranchs**
- <sup>4</sup> *Armina tigrina* Rafinesque ..... Tiger Nudibranch
- Cavoliniidae — Pteropods**
- <sup>4</sup> *Creseis acicula* Rang ..... Straight Needle Pteropod
- Class Gastropoda — The Snails (Univalves)**
- Littorinidae — Periwinkles**
- Littorina irrorata* Say ..... Marsh Periwinkle
- Hydrobidae — Littoridinas**
- <sup>4</sup> *Littoridina* Sp. .... Littoridina (undescribed)
- Vitrinellidae — Vitrinellids**
- <sup>4</sup> *Meioceras nitidum* Stimpson ..... Eel Grass Vitrinellid
- <sup>4</sup> *Solariorbis mooreana* Vanatta ..... Moore's Vitrinella
- Triphoridae — Triphorids**
- <sup>4</sup> *Triphora nigrocincta* C. B. Adams ..... Black-circled Triphora
- <sup>4</sup> *Finella dubia* d'Orbigny ..... Dubious Finella
- Epitonidae — Epitonids**
- <sup>4</sup> *Epitonium rupiculum* (Kurtz) ..... Rock-inhabiting Peg
- Fissurellidae — Keyhole Limpets**
- <sup>4</sup> *Diodora cayenensis* (Lamarck) ... Little or Cayenne Keyhole Limpet
- <sup>4</sup> *Lucapinella limatula* Reeve ..... File Fleshy Limpet
- Rissoinidae — Rissoinas**
- <sup>4</sup> *Rissoina chesneli* Michaud ..... Chesnel's Rissoina
- Calyptraeidae — Boat Shells**
- <sup>4</sup> *Crepidula convexa* Say ..... Convex Slipper-shell
- Crepidula fornicata* Linnaeus ..... Common Atlantic Slipper-shell
- Crepidula plana* Say ..... Eastern White Slipper-shell
- Terebridae — Augur Shells**
- <sup>4</sup> *Terebra dislocata* Say ..... Dislocated Augur
- <sup>4</sup> *Terebra salleana* Deshayes ..... Salle's Augur
- Volutidae — Volutes**
- <sup>4</sup> *Scaphella junonia* Shaw ..... Junonia
- Cancellariidae — Nutmegs**
- <sup>4</sup> *Cancellaria reticulata* Linnaeus ..... Common Nutmeg
- Olividae — Olives**
- <sup>4</sup> *Oliva sayana* Ravenel ..... Lettered Olive
- <sup>4</sup> *Olivella mutica* (Say) ..... Little Olive

<i>Naticidae</i> — Moon Shells	
<sup>4</sup> <i>Natica pusilla</i> Say	Miniature Natica
<i>Polinices duplicatus</i> (Say)	Shark Eye, Sand-color Snail
<i>Acteonidae</i> — Small Bubble Shells	
<sup>4</sup> <i>Haminoea antillarum</i> d'Orbigny	Globose Paper Bubble
<i>Cassidae</i> — Helmet Shells	
<i>Phalium granulatum</i> (Born)	Scotch Bonnet
<i>Columbellidae</i> — Dove Shells	
<sup>4</sup> <i>Anachis avara</i> Say	Greedy Dove Shell
<sup>4</sup> <i>Anachis obesa</i> C. B. Adams	Fat Dove Shell
<sup>4</sup> <i>Mitrella lunata</i> (Say)	Lunar Columbella
<i>Pyramidellidae</i> — Odostomes	
<sup>4</sup> <i>Odostomia seminuda</i> (C. B. Adams)	Half-smooth Odostome
<i>Cerithiidae</i> — Horn Shells	
<sup>4</sup> <i>Bittium varium</i> Pfeiffer	Variable Bittium
<sup>4</sup> <i>Seila adamsi</i> H. E. Lea	Adams Miniature Cerith
<i>Muricidae</i> — Rock Shells	
<sup>4</sup> <i>Murex fulvescens</i> Sowerby	Spine-ribbed Murex
<sup>1</sup> <i>Thais haemastoma</i> (Linnaeus)	Oyster Drill
<i>Melongenidae</i> — Large Whelks	
<i>Busycon perversum</i> (Linnaeus)	Perverse Whelk
<sup>4</sup> <i>Busycon spiratum</i> (Lamarck)	Pear Whelk
<i>Buccinidae</i> — Whelks	
<sup>2</sup> <i>Cantharus cancellarius</i> Conrad	Cancellate Cantharus
<i>Fasciolaridae</i> — Fasciolarids	
<sup>4</sup> <i>Fasciolaria hunteria</i> (G. Perry)	Banded Tulip
<i>Nassariidae</i> — Mud Whelks	
<sup>4</sup> <i>Nassarius acutus</i> (Say)	Pointed Basket Shell
<i>Nassarius vibex</i> (Say)	Common Eastern Nassa
<i>Ellobiidae</i> — Ear Snails	
<sup>4</sup> <i>Melampus bidentatus</i> Say	Salt Marsh Snail
<i>Viviparidae</i> — Swamp Snails	
<i>Viviparus</i> sp.	Swamp Snail
<i>Oleacinidae</i> — Flesh-eating Land Snails	
<i>Euglandina rosea</i> (Ferrusac)	Rosy Euglandina
Class Cephalopoda — Cuttlefishes	
<i>Octopodidae</i> — Octopuses	
<i>Octopus vulgaris</i> Lamarck	Octopus

<sup>1</sup> Species collected by both Richmond, 1944-1960, and C. F. Baker.

<sup>2</sup> Other species collected by C. F. Baker prior to 1902.

NOTE: Specimens collected by C. F. Baker deposited in the Academy of Natural Sciences of Philadelphia, Penna. in 1902. These were listed by E. G. Vanatta (1903).

<sup>3</sup> Species collected by Rosso, 1951.

<sup>4</sup> Species listed by Moore, 1960, in addition to the other collections.  
Unnumbered species collected by Richmond (1944-1961) deposited in the Academy of Natural Sciences of Philadelphia.

Phylum ARTHROPODA — Segmented Animals

Class Merostomata — Horseshoe Crabs

Order Xiphosura

*Limulidae*

- <sup>1</sup> *Limulus polyphemus* Linnaeus ..... Horseshoe Crab

Class Crustacea — Crustaceans

Subclass Branchiopoda

*Branchiopodidae*

- <sup>1</sup> *Branchipus* sp. .... Fairy Shrimp

Subclass Ostracoda

*Lynceidae*

- <sup>1</sup> *Eurycerus lamellatus* (Muller) ..... Muller's Waterflea

Subclass Copepoda

*Acartiidae*

- Acartia tonsa* Dana ..... Common Copepod

Subclass Cirripedia

*Balanidae*

- <sup>1</sup> *Balanus tintinnabulum* Linnaeus ..... Acorn Barnacle

- <sup>1</sup> *Balanus eburneus* Gould ..... Ivory Barnacle

- <sup>1</sup> *Chelonibia patula* (Rangoni) ..... Crab Barnacle

*Lepadidae*

- Octolasmis mülleri* (Coker) ..... Goose-neck Barnacle

Subclass Malacostraca

Suborder Isopoda

*Oniscidae*

- <sup>1</sup> *Cylisticus convexus* (DeGeer) ..... Convex Sowbug

Suborder Amphipoda

*Talitridae*

- <sup>1</sup> *Orchestia platensis* Krøyer ..... Common Sandflea

- <sup>1</sup> *Talorchestia longicornis* (Say) ..... Long-horned Sandflea

*Gammaridae*

- <sup>1</sup> *Gammarus locusta* (Linnaeus) ..... Seaweed Hopper

*Pontoporeiidae*

- Haustorius* sp. .... Haustorius

Order Stomatopoda

*Squillidae*

- Squilla empusa* Say ..... King Shrimp, Mantis Shrimp

Order Decapoda

*Portunidae*

- Arenaeus cribrarius* (Lamarck) ..... Swimming Crab

- Callinectes ornatus* Ordway ..... Ornate Swimming Crab

- Callinectes sapidus* Rathbun ..... Common Blue Crab, Blue Edible Crab

- Ovalipes ocellatus guadulpensis* (de Saussure) ..... Lady Crab

- Portunus spinicarpus* (Stimpson) ..... Portunid Crab

- Portunus spinimanus* Latreille ..... Portunid Crab

*Callianassidae*

- Callinassa jamaicensis louisianensis* Schmitt ..... Mud Shrimp

- Hippidae*
- Emerita portoricensis* Schmitt ..... Puerto Rican Mole Crab
- <sup>1</sup> *Emerita talpoida* Say ..... Baitbug, Sandbug
- Euceramus praelongus* Stimpson ..... Sandbug
- Majidae*
- Libinia dubia* Milne Edwards ..... Long-beaked Spider Crab
- <sup>1</sup> *Libinia emargomarta* Leach ..... Common Spider Crab
- Calappidae*
- Hepatus epheliticus* (Linnaeus) ..... Box Crab
- Xanthidae*
- Menippe mercenaria* (Say) ..... Stone Crab
- Ocypodidae*
- <sup>1</sup> *Ocypode quadrata* (Fab.) ..... Ghost Crab
- (Syn. *O. albicans* Bosc)
- Paguridae*
- Pagurus annulipes* (Stimpson) ..... Hermit Crab
- Pagurus floridanus* (Benedict) ..... Hermit Crab
- Pagurus longicarpus* Say ..... Hermit Crab
- <sup>1</sup> *Pagurus pollicaris* Say ..... Large Hermit Crab
- Penaeidae*
- <sup>1</sup> *Penaeus aztecus* Ives ..... Brown Shrimp, Edible Shrimp
- <sup>1</sup> *Penaeus duorarum* Burkenroad ..... Pink Shrimp
- <sup>1</sup> *Penaeus fluviatilis* Say ..... White Shrimp, Common Shrimp
- Sicyonia brevirostris* (Stimpson) ..... Rock Shrimp
- Chaetopteridae*
- Petrochirus bahamensis* (Herbst.) ..... Large Hermit Crab
- Pinnotheridae*
- Pinnixia chacei* Wass ..... Chace's Worm Crab
- Pinnixia chaetopterna* Stimpson ..... Parchment Worm Crab
- Porcellanidae*
- Porcellana sayana* Leach ..... Porcellanid Crab
- Palaemonidae*
- Leander tenuicornis* (Say) ..... Sargassum Shrimp
- Class Myriapoda
- Subclass Chilopoda
- Scolopendridae*
- <sup>1</sup> *Scolopendra viridis* Say ..... Green Centipede
- <sup>1</sup> Species collected by Richmond (1944)
- Remainder taken from a Gulf Coast Research Laboratory list.
- <sup>1</sup>Class Insecta (Hexapoda) — The Insects
- Thysanura — Bristletails
- Lepismidae*
- Lepisma saccharina* Linnaeus
- Odonata — Dragonflies, Damselflies
- Aeshnidae*
- Anax junius* (Drury)

Coenagrionidae

*Anomalagrion hastatum* (Say)

*Argia* sp.

*Ischnura ramburii* Selys

*Ischnura verticalis* (Say)

Libellulidae

*Erythrodiplax berenice* (Drury)

*Pachydiplax longipennis* (Burm.)

*Erythemis simplicicollis* (Say)

Plecoptera — Stoneflies

Genus?

Orthoptera — Grasshoppers, Crickets, Roaches, et al.

Acrididae

*Dissosteira carolina* (Linnaeus)

*Psinidia fenestralis* (Serv.)

*Scirtetica marmorata picta* (Scudd.)

*Schistocera americana* (Drury)

*Trimerotropis citrina* Scudd.

Blattidae

*Blattella germanica* (Linnaeus)

*Eurycotis floridana* (Walk.)

*Parcoblatta* sp.

*Parcoblatta fulvescens* (S. & Z.)

*Periplaneta americana* (Linnaeus)

*Periplaneta brunnea* Burm.

*Periplaneta fuliginosa* (Serv.)

*Supella supellectilium* (Serv.)

Gryllidae

*Acheta* sp.

*Acheta assimilis* (Fab.)

*Anaxipha delicatula* (Scudd.)

*Nemobius* sp.

Mantidae

*Stagmomantis carolina* (Joh.)

Tettigidae

*Tettigidea lateralis* (Say)

Tettigoniidae

*Conocephalus fasciatus* (Deg.)

*Conocephalus spartinae* (Fox)

*Neoconocephalus triops* (Linnaeus)

*Orchelimum concinnum* Scudd.

*Scudderella texensis* (S. & P.)

Dermaptera — Earwigs

Labiduridae

*Labidura riparia* (Pallas)

Isoptera — Termites

*Kalotermitidae*

*Kalotermes snyderi* Light (Winged — S. E. U. S., Antilles)

*Rhinotermitidae*

*Reticulitermes* sp.

Corrodentia — Psocids, Booklice

*Peripsocidae*

*Peripsocus* sp.

*Psocidae*

*Psocus* sp., *striatus* Walk. or near.

Thysanoptera — Thrips

*Thrips* sp.

Hemiptera — True Bugs

*Anthocoridae*

*Lasiochilus hirtellus* Drake & Harris

*Orius insidiosus* (Say)

*Belostomatidae*

*Belostoma flumineum* Say

*Belostoma testaceum* (Leidy)

*Lethocerus americanus* (Leidy)

*Cimidae*

*Cimex lectularius* Linnaeus

*Coreidae*

*Leptoglossus phyllopus* (Linnaeus)

*Corixidae*

*Trichocorixa verticalis* (Fieber)

*Cydnidae*

*Amnestus basidentatus* Froeschner (New species 1960)

*Amnestus pusio* Blatchley

*Gelastocoridae*

*Gelastocoris* sp.

*Gelastocoris oculatus* (Fab.)

*Lygaeidae*

*Cymus virescens* (Fab.)

*Myodocha serripes* (Olivier)

*Nysius californicus alabamensis* Baker

*Oedancala crassimana* (Fab.)

*Oncopeltus fasciatus* (Dallas)

*Pachybrachius bilobatus* (Say)

*Pachybrachius vinctus* (Say)

*Paromius longulus* (Dallas)

*Mesovelidae*

*Mesovelia mulsanti bisignata* Jaczewski

*Miridae*

*Ceratocapsus* sp.  
*Deraeocoris nebulosus* (Uhler)  
*Lygus apicalis* Fieber  
*Pilophorus vanduzeei* Knight  
*Polymerus basalis* (Reuter)

*Nabidae*

*Nabis capsiformis* Germar

*Neididae*

*Aknisus multispinus* (Ashmead)

*Ochteridae*

*Ochterus banksi* Barber

*Pentatomidae*

*Asopinae*

*Alcaeorrhynchus grandis* (Dallas)

*Pentatominae*

*Edessa bifida* (Say)  
*Nezara viridula* (L.)  
*Pangaeus bilineatus* (Say)  
*Thyanta calceata* (Say)  
*Thyanta custator* (Fab.)

*Scutellerinae*

*Diolcus irroratus* (Fab.)  
*Tetyra bipunctata* (H. -S.)

*Reduviidae*

*Emesa* sp.  
*Triatoma sanguisuga sanguisuga* (Le C.)

*Saldidae*

*Pentacora hirta* (Say)  
*Pentacora sphacelata* (Uhler)  
*Saldula opacula* (Zetterstedt)

Homoptera — Cicadas, leafhoppers, aphids, scale-bugs *et al.*

*Cicadellidae*

*Balclutha abdominalis* (Van D.)  
*Balclutha neglecta* (De L. and Dev.)  
*Carneiocephala flaviceps* (Riley)  
*Chlorotettix viridius* Van D.  
*Deltoccephalus flavicosta* Stål  
*Draeculacephala* sp.  
*Graminella nigrifrons* (Forbes) — probably *fascifrons* (Stål)  
*Graminella villicus* (Crumb)  
*Haldorus australis* (De L.)  
*Macrosteles divisus* (Uhler)  
*Menosoma cincta* (O. and B.)  
*Spangbergiella vulnerata* (Uhler)

*Cicadidae*

*Diceroprocta vitripennis* Say



*Delphacidae*

*Delphacodes propinqua* (Fieber)  
*Euidella weedi* (Van D.)  
*Sogata furcifera* (Horv.)

*Lecanidae*

*Ceroplastes floridensis* Comstock

Neuroptera — Lacewing-flies, antlions, et al.

*Chrysopidae*

*Chrysopa* sp.

*Hemerobiidae*

*Sympherobius amicus* (Fitch)

*Myrmeleontidae*

*Brachynemurus longicaudus* (Burm.)  
*Heoclisis americana* (Drury)  
*Myrmeleon crudelis* Walter  
*Paranthaclisis* sp.

Trichoptera — Caddice-flies

Genus?

Lepidoptera — Butterflies, Moths, Skippers

Suborder Rhopalocera

Superfamily Papilionoidea

*Danaidae*

*Danaus gilippus berenice* (Cramer)  
*Danaus plexippus plexippus* (Linnaeus)

*Heliconiidae*

*Agraulis vanillae nigrior* Michener

*Nymphalidae*

*Polygonia interrogationis* (Fabricius)  
*Precis lavinia coenia* (Huebner)  
*Speyeria cybele cybele* (Fabricius)  
*Vanessa atalanta* (Linnaeus)

*Papilionidae*

*Papilio* sp.

*Pieridae*

*Eurema daira daira* (Latreille)  
*Eurema lisa lisa* (Boisduval and Le Conte)  
*Phoebis sennae eubule* (Linnaeus)

Suborder Heterocera

Superfamily Sphingoidea

*Sphingidae*

*Enyo lugubris* Linnaeus

Superfamily Noctuoidea

*Amatidae*

*Cisseps fulvicollis* Huebner  
*Cosmosoma myrodora* Dyar  
*Didasys belae* Grote

**Arctiidae**

*Apantesis radians* Walker  
*Cisthene bellicula* Dyar  
*Utetheisa bella* Linnaeus

**Phalaenidae (Noctuidae)**

*Doryodes* sp.  
*Doryodes bistrialis* Geyer  
*Leucania* sp.  
*Nedra ramosula* Guenee  
*Perigea* sp.  
*Prodenia ornithogalli* Guenee  
*Pseudaleia unipuncta* Haworth

**Pyralididae (Pyraustidae)**

Genus?  
*Crambus* sp.  
*Dioryctria zimmermani* Grote  
*Hymenia perspectalis* Huebner  
*Loxostege similalis* Guenee  
*Sameodes elealis* Walker

**Diptera — Flies**

**Agromyzidae**

*Cerodontha dorsalis* (Loew)  
*Liriomyza melampyga* (Loew)  
*Liriomyza subpusilla* group  
*Tethina* sp.

**Asilidae**

*Atomosia* sp.  
*Erax* sp.

**Bibionidae**

*Philia* sp.  
*Philia serotina* (Loew)  
*Plecia nearctica* Hardy

**Bombyliidae**

*Anthrax* sp.  
*Geron* sp.

**Calliphoridae**

*Callitroga* sp.  
*Callitroga macellaria* (Fab.)  
*Calliphora vicina* R. D.  
*Calliphora vomitoria* (L.)  
*Lucilia* sp.  
*Lucilia illustris* (Meig.)  
*Phaenicia* sp.  
*Phaenicia cluvia* (Walk.)  
*Phaenicia cuprina* (Wied.)  
*Phaenicia sericata* (Meig.)  
*Phormia regina* (Meig.)

**Cecidomyiidae**

*Anarete* sp.  
*Asphondylia* sp.  
*Lestremia* sp.  
*Neolasioptra* sp.  
*Phytophaga* sp.

**Ceratopogonidae**

*Alluaudomyia bella* (Coq.)  
*Atrichopogon* sp.  
*Bezzia* sp.  
*Culicoides canithorax* Hoffman  
*Culicoides furens* (Poey)  
*Culicoides melleus* (Coq.)  
*Dasyhelea* sp.  
*Forcipomyia* sp.  
*Forcipomyia fuliginosa* (Meig.)  
*Heteromyia* sp.  
*Leptoconops* sp.  
*Monohelea* sp.  
*Stilobezzia* sp.

**Chaoboridae**

*Chaoborus punctipennis* Say  
*Corethrella brakeleyi* Coq.

**Chironomidae**

*Apedilum elachistus* (Townes)  
*Calopsectra* sp.  
*Coelotanypus tricolor* (Loew)  
*Pelopia* sp.  
*Pentaneura* sp.  
*Pentaneura illinoensis* (Mall.)  
*Pentaneura* sp. (monilis group)  
*Pentaneura monilis* (L.)  
*Polypedilum* n. sp. (Townes MS)  
*Polypedilum* sp.  
*Polypedilum parvum* (Townes)  
*Procladius bellus* (Loew)  
*Tendipes* sp.  
*Tendipes attenuatus* (Walker)

**Chloropidae**

*Diplotoxa microcera* Loew  
*Hippelates* sp.  
*Hippelates bicolor* Coq.  
*Hippelates particeps* (Beck.)  
*Hippelates plebejus* Loew  
*Hippelates pusio* Loew  
*Lasiopleura capax* (Coq.)  
*Oscinella* sp.  
*Oscinella infesta* Beck.  
*Siphonella cinerea* Loew  
*Siphonella parva* Adams  
*Siphonella punctifrons* Beck.

#### Culicidae

*Aedes* sp.  
*Aedes aegypti* (L.)  
*Aedes atlanticus* D. & K.  
*Aedes atlanticus-tormentor* D. & K.  
*Aedes infirmatus* D. & K.  
*Aedes mitchellae* (Dyar)  
*Aedes sollicitans* (Walk.)  
*Aedes taeniorhynchus* (Wied.)  
*Aedes vexans* (Meig.)  
*Anopheles atropos* D. & K.  
*Anopheles bradleyi* King  
*Anopheles crucians* Wied.  
*Anopheles crucians-bradleyi* King  
*Anopheles quadrimaculatus* Say  
*Culex* sp.  
*Culex apicalis* Adams  
*Culex erraticus* D. & K.  
*Culex nigripalpus* Theob.  
*Culex pilosus* (D. & K.)  
*Culex quinquefasciatus* Say  
*Culex restuans* Theob.  
*Culex salinarius* Coq.  
*Culiseta inornata* (Will.)  
*Mansonia perturbans* (Walk.)  
*Psorophora* sp.  
*Psorophora ciliata* (Fab.)  
*Psorophora confinnis* (Lynch-Arribalzaga)  
*Psorophora discolor* (Coq.)  
*Psorophora ferox* (Humb.)  
*Psorophora howardii* (Coq.)  
*Uranotaenia lowii* (Theob.)  
*Uranotaenia sapphirina* (O. S.)

#### Dolichopodidae

*Chrysotus* sp.  
*Gymnopternus* sp.  
*Hydrophorus* sp.  
*Pelastoneurus* sp.  
*Pelastoneurus vagans* Loew  
*Psilopus* sp.

#### Drosophilidae

*Drosophila* sp.  
*Drosophila busckii* Coq.  
*Drosophila guttifera* Walker  
*Drosophila melanogaster* Meig.  
*Drosophila repleta* Woll.  
*Leucophenga quadrimaculata* (Walk.)

#### Empididae

*Syneches* sp.  
*Syneches phthia* (Walk.)

*Ephydridae*

*Hydrellia* sp.  
*Notiphila* sp.  
*Notiphila olivacea* Cr.  
*Paralimna decipiens* Loew  
*Polytrichophora conciliata* Cr.  
*Scatella* sp.  
*Scatella stagnalis* (Fall)  
*Zeros* n. sp.

*Micropezidae*

*Taenaptera* sp.  
*Taenaptera trivittata* Macq.

*Muscidae*

*Atherigona orientalis* Schin.  
*Bithoracochaeta leucoprocta* (Wd.)  
*Coenosia ovata* Stein  
*Fannia pusio* (Wd.)  
*Fucellia maritima* (Hal.)  
*Hylemia* sp.  
*Limnophora* sp.  
*Limnophora narona* (Walk.)  
*Lispe albitarsis* Stein  
*Morellia micans* (Macq.)  
*Musca domestica* L.  
*Ophyra aenescens* (Wd.)  
*Phyllogaster* sp.  
*Siphona irritans* (L.)  
*Stomoxys calcitrans* (L.)

*Mycetophilidae*

*Leia bivittata* Say

*Otitidae*

*Euxesta* sp.  
*Euxesta*, nr. *latifasciata* (Wulp.)  
*Euxesta notata* (Wied.)  
*Euxesta spoliata* Loew

*Phoridae*

*Megaselia* sp.

*Pipunculidae*

*Dorilas* sp.

*Psychodidae*

*Psychoda* sp.  
*Psychoda alternata* Say  
*Telmatosocopus albinpunctatus* (Will.)

*Rhagionidae (Leptidae)*

*Sarcophagidae*

Genus?  
*Sarcophaga* sp.  
*Sarcophaga bullata* Pk.  
*Sarcophaga derelicta* (Walk.)  
*Sarcophaga rapax* Walk.  
*Sarcophaga sarracenioides* Ald.

*Sciaridae*

*Sciara* sp.

*Sciomyzidae*

*Dictya iron* Steyskal (New species 1960)  
*Pherbellia nana* (Fallen)

*Sphaeroceridae*

*Copromyza* sp.  
*Leptocera* sp.  
*Leptocera fontinalis* Fallen

*Syrphidae*

*Mesograpta* nr. *boscii* (Macq.)  
*Tubifera* sp.

*Tabanidae*

*Chrysops* sp.  
*Chrysops atlanticus* Pech.  
*Chrysops flavidus* Wied.  
*Chrysops univittatus* Macq.  
*Tabanus* sp.  
*Tabanus abdominalis* Fabr.  
*Tabanus acutus* (Bigot)  
*Tabanus atratus* (Fab.)  
*Tabanus gladiator* Stone  
*Tabanus lineola* Fab.  
*Tabanus nigrovittatus* Macq.  
*Tabanus quinquevittatus* Wied.  
*Tabanus sparus milleri* Whitn.  
*Tabanus trijunctus* Walker

*Tachinidae*

*Achaetoneura* sp. nr. *archippivara* (Will.)  
*Eucelatoria rubentis* (Coq.)  
*Paradidyma singularis* (Townes)  
*Siphophyto floridensis* Townes

*Tephritidae*

*Trupanea actinobola* (Loew)  
*Trupanea vicina* (Wulp)  
*Xanthaciura connexionis* Benj.

*Tipulidae*

Subfamily Tipulinae

*Pales* sp.  
*Pales suturalis costumarginata* (Dietz)  
*Tipula* (*Yamatotipula*) *floridensis* Alex.  
*Tipula* (*Yamatotipula*) *ludoviciana* Alex.

Subfamily Limoniinae  
Tribe Limoniini

- Limonia* sp.  
\**Limonia* (*Limonia*) *rara* (O. S.)  
\**Limonia* (*Dicranomyia*) *distans* (O. S.)  
\**Limonia* (*Dicranomyia*) *floridana* (O. S.)  
*Limonia* (*Dicranomyia*) *liberta* (O. S.)  
*Limonia* (*Rhipidia*) *domestica* (O. S.)  
\**Limonia* (*Geranomyia*) *rostrata* (Say)  
*Limonia* (*Geranomyia*) *vanduzeei* (Alex.)  
\**Helius* (*Helius*) *flavipes* (Macquart)

Tribe Hexatomini

- Pseudolimnophila* (*Pseudolimnophila*) *luteipennis* (O. S.)

Tribe Eriopterini

- \**Gonomyia* (*Lipophleps*) *puer* Alex.  
\**Gonomyia* (*Lipophleps*) *sulphurella* Osten Sacken  
*Erioptera* sp.  
*Erioptera* (*Symplecta*) *cana* (Walker)  
*Erioptera* (*Erioptera*) *furcifer* Alex.  
*Erioptera* (*Ilisia*) *graphica* O. S.  
*Erioptera* (*Mesocyphona*) *knabi* Alex.  
\**Erioptera* (*Mesocyphona*) *parva* O. S.  
\**Toxorhina* (*Toxorhina*) *magna* O. S.  
\*New to Mississippi list — according to Alexander.

Coleoptera — Beetles

*Alleculidae*

- Hymenorus* sp.

*Anobiidae*

- Ernobius* sp.  
*Ernobius mollis* (L.)  
*Lasioderma serricorne* (Fab.)  
*Petalium bistriatum* (Say)

*Anthicidae*

- Anthicus* sp.  
*Notoxus* sp.

*Bruchidae*

- Acanthoscelides obtectus* (Say)  
*Megacerus coryphae* (Oliv.)

*Buprestidae*

- Buprestis lineata* Fab.  
*Buprestis maculipennis* Gory  
*Chalcophora* sp.  
*Chalcophora georgiana* (Le C.)  
*Chalcophora virginensis* (Drury)  
*Chrysobothris floricola* Gory

*Byrrhidae*

- Limnichoderus* sp. or (*Limnichius*)

**Cantharidae**

*Chauliognathus* sp.  
*Chauliognathus marginatus* Fab.

**Carabidae**

*Agonoderus* sp.  
*Agonoderus infuscatus* (Dej.)  
*Agonoderus lecontei* Chd.  
*Ardistamis schaumii* Le C.  
*Bembidion constrictum* (Le C.)  
*Calosoma sayi* Dej.  
*Calosoma scrutator* (Fab.)  
*Clivinia* sp.  
*Dyschirius* sp.  
*Galerita janus* Fab.  
*Harpalus pennsylvanicus* De G.  
*Harpalus viridiaenus* Beauv.  
*Oodes amaroides* Dej.  
*Oodes duodecimstriatus* Chev.  
*Oodes quartuordecimstriatus* Chaud.  
*Tachistodes testaceus* (Dej.)  
*Tetragonoderus intersectus* Germ.  
*Triliarthrus badiipennis* (Hald.)

**Cerambycidae**

*Acanthocinus nodosus* (Fab.)  
*Acanthocinus obsoletus* (Oliv.)  
*Anoplium inerme* (Newm.)  
*Desmocerus* sp.  
*Eupagonius tomentosus* (Hald.)  
*Smodicum cucujiforme* (Say)  
*Stenodontes dasystemus* Say

**Chrysomelidae**

*Altica* sp.  
*Altica litigata* Fall  
*Altica ludoviciana* Fall  
*Diabrotica undecimpunctata howardi* Barber  
*Lema* sp.  
*Oedionychus concinna* (Fab.)  
*Systema frontalis* (Fab.)

**Cicindelidae**

*Cicindela dorsalis saulcyi* (Guer.)  
*Cicindela trifasciata ascendens* (Le C.)  
*Megacephala (Tetracha) carolina* L.

**Cleridae**

*Cymatodera undulata* (Say)  
*Necrobia rufipes* (DeGeer)



**Coccinellidae**

*Chilocorus bivulnerus* Muls.  
*Coleomegilla maculata fuscilabris* Muls.  
*Cycloneda sanguinea* (L.)  
*Hippodamia convergens* Guer.  
*Hyperaspis binotata* Say  
*Naemia serialis* (Melsh.)  
*Olla abdominalis plagiata* Csy.

**Cucujidae**

*Sylvanus bidentatus* (Fab.)

**Curculionidae**

*Brachybamus electus* Germ.  
*Hyperodes anthracinus* (Dtz.)  
*Pachylobius picivorus* Germ.  
*Perigaster cretura* (Hbst.)  
*Smicronyx sculpticollis* Gsy.

**Dryopidae**

*Pelonomus* (near *obscurus* Le C.)

**Dytiscidae**

*Agabus johannis* Fall  
*Bidessus pullus pullus* Le C.  
*Copelatus chevrolati* Aubé  
*Hydaticus* sp.  
*Hydaticus bimarginatus* Say  
*Laccophilus proximus* (Say)  
*Thermonectus basillaris* (Harris)

**Elateridae**

*Agrypnus* sp.  
*Alaus* sp.  
*Alaus myops* (Fab.)  
*Conoderus* sp.  
*Conoderus bellus* (Say)  
*Ischiodontus* sp.

**Gyrinidae**

*Dineutes* sp.  
*Dineutes carolinus* Le C.

**Haliplidae**

*Peltodytes* sp.  
*Peltodytes sexmaculatus* Robts.

**Helodidae**

*Cyphon* sp.  
*Ora* sp.

**Heteroceridae**

*Heterocerus undatus* Melsh.

**Histeridae**

*Saprinus pennsylvanicus* (Payk.)

*Hydrophilidae*

*Anaena limbata* (F.)  
*Berosus* sp.  
*Berosus exiguus* Say  
*Berosus infuscatus* Le C.  
*Chaetarthria pallida* (Le C.)  
*Cercyon praelectatus* (Say)  
*Enochrus hamiltoni* (Horn)  
*Enochrus ochraceus* (Melsh.)  
*Enochrus perplexus* (Le C.)  
*Enochrus pygmaeus* (F.) complex  
*Helobata striata* (Brullé)  
*Hydrobiomorpha casta* (Say)  
*Hydrochus simplex* (Le C.) (Hydraenidae)  
*Paracymus nanus* (Fall)  
*Paracymus subcupreus* (Say)  
*Tropisternus blatchleyi* d'Orch.  
*Tropisternus lateralis nimbatus* Say  
*Tropisternus mexicanus striolatus* (Le C.)  
*Tropisternus quadristriatus* Horn  
*Tropisternus striolatus* Le C.

*Lampyridae*

*Photuris pennsylvanica* (DeGeer)

*Melyridae*

*Collops nigriceps floridanus* Schaeffer

*Mordellidae*

*Mordellistena* sp.

*Nitidulidae*

*Carpophilus* sp.

*Noteridae*

*Suphisellus floridanus* Blatch.  
*Suphisellus gibbulus* Crotch.

*Oedemeridae*

*Alloxaxis dorsalis* (Mels.)  
*Alloxaxis pleuralis* (Le C.)  
*Oxaxis* sp.

*Scarabaeidae*

*Anomala* sp.  
*Anomala flavipennis* Burm.  
*Aphodius* sp.  
*Aphodius cuniculus* Chev.  
*Aphodius lividus* (Oliv.)  
*Aphodius ruricola* Melsh.  
*Ataenius* sp.  
*Ataenius alternatus* Melsh.  
*Ataenius cylindrus* Horn  
*Ataenius imbricatus* (Melsh.)

*Ataenius miamii* Cartwright  
*Ataenius platensis* (Blanch.)  
*Ataenius saluator* Fall  
*Ataenius wenzelii* Horn  
*Bothynus cuniculus* (Fab.)  
*Bothynus gibbosus* (DeGeer)  
*Cyclocephala immaculata* (Oliv.)  
*Cyclocephala seditiosa* (Le C.)  
*Diplotaxis* sp.  
*Dyscinetus morator* (Fab.)  
*Phyllophaga* sp.  
*Phyllophaga latifrons* (Le C.)  
*Phyllophaga prununculina* (Burm.)  
*Pleurophorus longulus* Cartwright  
*Psammodius bidens* Horn  
*Trox suberosus* (Fab.)

#### Scolytidae

*Ips calligraphus* Germ.  
*Ips grandicollis* (Eich.)  
*Pityoborus comatus* (Zimm.)  
*Xyleborus affinis* (Eich.)

#### Staphylinidae

*Aleochara bipustulata* (L.)  
*Atheta virginica* (Bernhaver)  
*Bledius* sp.  
*Bledius analis* Le C.  
*Bledius cordatus* Say  
*Bledius gularis* Er.  
*Bledius punctatissimus* Le C.  
*Bledius turbulentus* Csy.  
*Creophilus maxillosus* (L.)  
*Paederus littorarius* Grav.  
*Pinophilus parvus* Le C.  
*Philonthus* sp.

#### Tenebrionidae

*Alobates pennsylvanica* (DeGeer)  
*Alphitobius diaperinus* (Panz.)  
*Uloma punctulata* Le C.  
*Leichenium canaliculatum variegatum* (Klug)  
*Phaleria longula* Le C.

Hymenoptera — Bees, Wasps, Ants, et al.

#### Andrenidae

*Perdita swenki* Cwfd.

#### Apidae

*Bombus americanorum* (F.)  
*Psithyrus variabilis* (Cr.)

*Braconidae*

*Apanteles* sp.  
*Aphaereta muscae* Ashm.  
*Macrocentrus delicatus* Cr.  
*Meteorus* sp.  
*Meteorus indagator* (Riley)  
*Meteorus leviventris* (Wesmael)  
*Microplitis* sp.  
*Phanerotoma* sp.  
*Phanerotoma fasciata* Prov.  
*Rogas* sp.  
*Rogas stigmator* (Say)

*Chalcididae*

Genus?

*Chrysididae*

*Chrysis intricata* Br.

*Formicidae*

*Camponotus abdominalis floridanus* (Buckley)  
*Camponotus nearcticus* Emery  
*Crematogaster laeviuscula* Mayr.  
*Dorymyrmex* sp.  
*Dorymyrmex pyramieus* var. *flavus* McCook  
*Formica* (*Neoformica*) sp.  
*Formica pallide-fulva schaufussi* Mayr.  
*Iridomyrmex humilis* Mayr.  
*Iridomyrmex pruinosus* (Roger)  
*Pheidole* sp.  
*Pogonomyrmex badius* (Latr.)  
*Ponera opaciceps* Mayr.  
*Solenopsis saevissima richteri* (Forel)  
*Tetramorium gineense* (Fab.)

*Halictidae*

*Agapostemon virescens* (Fab.)

*Ichneumonidae*

*Enicospilus* sp.  
*Itoplectis conquisitor* (Say)

*Pompilidae*

*Anoplius* sp.  
*Anoplius virginianensis* (Cr.)

*Pteromalidae*

*Pteromalus* sp.

*Sphecidae*

*Bembix carolina* (Fab.)  
*Chalybion californicum* (Sauss.)  
*Microbembex monodonta* (Say)  
*Miscophus americanus* Fox  
*Nitela virginianensis* Roh.  
*Oxybelus emarginatum* Say  
*Sceliphron caementarium* (Dru.)

<sup>1</sup> All insects listed collected by Richmond.

Class Arachnida

Araneida — Spiders

*Theridiidae* — Comb-footed Spiders

*Latrodectus mactans* (Fab.) ..... Black Widow

*Araneidae* — Typical Orb-weavers

*Eustala anastera* (Walckender) ..... Orb-weaver

*Argiopidae* — Orb-weavers

*Gasteracantha cancriformis* (Linnaeus) ..... Spiny Orb-weaver

*Clubionidae* — Clubionids

*Clubiona* sp.

*Lycosidae* — Wolf-spiders

*Lycosa* sp.

*Attidae* — Jumping Spiders

*Phidippus variegatus* C. Koch ..... Southern Phidippus

*Micryphantidae* — Micryphants

Genus?

*Pseudoscorpionida* — Pseudoscorpions

*Pseudoscorpionidae* — False Scorpions

Genus?

*Acarina* — Mites and Ticks

*Ixodidae* — Ticks

*Dermacentor variabilis* (Say) ..... Wood Tick

*Haemaphysalis leporis-palustris* (Pack.) ..... Rabbit Tick

*Hydrachnidae* — Water-mites

*Hydrachnida* sp.

*Trombidiidae* — Harvest Mites

*Eutrombicula alfreddugesi* (Oudemans) .... Chigger, Harvest Mite

PHYLUM ECHINODERMATA

Class Holothuroidea

*Synaptidae* — Sea Cucumbers

*Leptosynapta crassipatina* H. L. Clark ..... Sea Cucumber

Class Echinoidea

*Scutellidae* — Sand Dollars

*Mellita quinquiesperforata* (Leske) . . . . . Keyhole Dollar

Class Asteroidea

*Luidiidae* — Starfishes

*Luidia alternata* (Say) ..... Say's Starfish

*Luidia clathrata* (Say) ..... Flat Starfish

Class Ophiuroidea

*Amphiuridae* — Brittle Stars

*Amphiodia gyraspis* H. L. Clark ..... Brittle Star

*Amphiodia limbata* (Grubb) ..... Brittle Star

*Hemipholis elongata* (Say) ..... Elongate Brittle Star

*Ophiophragmus filiograneus* (Lyman) ..... Brittle Star

## PHYLUM ENTEROPNEUSTA

### Balanidae — Acorn Worms

*Balanoglossus* sp. .... Acorn Worm

## PHYLUM CHORDATA

### Subphylum Urochorda

#### Molgulidae — Seagrapes

*Molgula manhattensis* DeKay ..... Sea Squirt, Seagrapes

### Subphylum Cephalochorda

#### Branchiostomidae — Lancelets

*Branchiostoma caribaeum* Sundevall Virginia Lancelet, Amphioxus

### Subphylum Craniata

### Class Pisces — The Fishes

#### Dasyatidae — Sting Rays

<sup>2</sup> *Dasyatis sayi* (LeSueur) ..... Say's Stingray

<sup>2</sup> *Dasyatis sabina* (LeSueur) ..... Sabina Stingray

#### Lepisosteidae — Garpikes

<sup>2</sup> *Lepisosteus spatula* (Lacépède) ..... Alligator Garpike

#### Clupeidae — Herrings

<sup>1</sup> *Brevoortia patronus* (Latrobe) ..... Large Scale Gulf Menhaden

<sup>1</sup> *Harengula pensacolatae* Goode & Bean .. Broad Sardine, Razorbelly

<sup>1</sup> *Opisthonema oglinum* (LeSueur) ..... Thread Herring

#### Engraulidae — Anchovies

<sup>1</sup> *Anchoa hepsetus* (Bonnaterre) ..... Striped Anchovy

#### Synodontidae — Lizard Fishes

<sup>1</sup> *Synodus foetens* (Linnaeus) ..... Lizardfish

#### Tachysuridae — Catfishes

<sup>2</sup> *Bagre marinus* (Mitchill) ..... Gafftopsail Catfish

<sup>1</sup> *Galeichthys felis* (Linnaeus) ..... Sea Catfish

#### Echelidae — Worm Eels

<sup>2/1</sup> *Myrophis punctatus* Lütken ..... Speckled Worm Eel

#### Belonidae — Needlefishes

<sup>1</sup> *Strongylura marina* (Walbaum) ..... Green Needlefish

#### Hemiramphidae — Halfbeaks

<sup>1/2/4</sup> *Hyporhamphus unifasciatus* (Ranzani) ..... Halfbeak

#### Cyprinodontidae — Top Minnows

<sup>2/3</sup> *Cyprinodon variegatus variegatus* Lacépède ..... Pursy Pupfish

<sup>3</sup> *Fundulus dispar notti* (Agassiz) Southern Starheaded Top Minnow

<sup>3</sup> *Fundulus grandis* (Baird & Girard) ..... Gulf Mummichog

<sup>1</sup> *Fundulus similis* (Baird and Girard) ..... Longnose Killifish

<sup>1</sup> *Lucania parva* (Baird and Girard) ..... Rainwater Fish

#### Poeciliidae — Livebearers

<sup>2</sup> *Gambusia affinis* (Baird and Girard) ..... Mosquito Fish

<sup>3</sup> *Mollienesia latipinna* LeSueur ..... Sailfin Molly

*Syngnathidae* — Pipefishes

- <sup>1</sup> *Hippocampus hudsonius* DeKay ..... Northern Seahorse  
<sup>1</sup> *Syngnathus louisianae* (Günther) ..... Louisiana Pipefish  
<sup>1</sup> *Syngnathus* sp. ....

*Moronidae* — Perches

- <sup>2</sup> *Roccus mississippiensis* Jordan and Eigenmann ..... White Perch

*Rachycentridae* — Cobias

- <sup>1</sup> *Rachycentron canadum* (Linnaeus) ..... Crab Eater

*Carangidae* — Jacks

- <sup>1</sup> *Carnax latus* Agassiz ..... Horseeye Jack  
<sup>1</sup> *Trachinotus carolinus* (Linnaeus) ..... Common Pompano  
<sup>1</sup> *Trachinotus falcatus* (Linnaeus) ..... Round Pompano  
<sup>1</sup> *Oligoplites saurus* (Schneider) ..... Leather Jacket

*Gerridae* — Jennys

- <sup>1</sup> *Eucinostomus argenteus* Baird and Girard ..... Silver Mojarra  
<sup>1</sup> *Eucinostomus gula* (Cuvier) ..... Common Mojarra

*Otolithidae* — Otolithids

- <sup>1</sup> *Cynoscion nebulosus* (Cuvier, Valenciennes) .. Speckled Sea Trout,  
 Spotted Weakfish

*Sciaenidae* — Croakers

- <sup>1</sup> *Bairdiella chrysurus* (Lacépède) ..... Silver Perch, Yellowtail  
<sup>1</sup> *Larimus fasciatus* Holbrook ..... Banded Croaker  
<sup>1</sup> *Leiostomus xanthurus* Lacépède ..... Goady, Spot  
<sup>1</sup> *Menticirrhus* sp. ....  
<sup>1</sup> *Menticirrhus littoralis* (Holbrook) ..... Surf Whiting  
<sup>1</sup> *Menticirrhus focaliger* Ginsburg ..... Gulf Whiting  
<sup>1</sup> *Micropogon undulatus* (Linnaeus) ..... Croaker  
<sup>2</sup> *Pogonias cromis* (Linnaeus) ..... Black Drum  
<sup>2</sup> *Sciaenops ocellata* (Linnaeus) ..... Redfish

*Sparidae* — Porgies

- <sup>2</sup> *Archosargus probatocephalus* (Walbaum) ..... Sheepshead  
<sup>1</sup> *Lagodon rhomboides* (Linnaeus) ..... Pinfish

*Dactyloscopidae* — Sand Stargazers

- <sup>1</sup> *Dactyloscopus tridigitatus* Gill ..... Sand Stargazer

*Uranoscopidae*

- <sup>1</sup> *Astroscopus y-graecum* Cuvier and Valenciennes .....  
 Southern Stargazer

*Blenniidae* — Blennys

- <sup>1</sup> *Chasmodes saburrae* Jordan and Gilbert ..... Florida Blenny

*Stromateidae* — Harvest Fishes

- <sup>1</sup> *Poronotus triacanthus* (Peck) ..... Butterfish

*Sphyracidae* — Barracudas

- <sup>1</sup> *Sphyracna borealis* DeKay ..... Northern Barracuda

*Mugilidae* — Mullet

- <sup>1/2</sup> *Mugil cephalus* Linnaeus ..... Striped Mullet  
<sup>1</sup> *Mugil curema* Cuvier and Valenciennes ..... White Mullet

Atherinidae — Silversides

- <sup>1</sup> *Membras martinicus* Cuvier and Valenciennes . . . Rough Silversides  
<sup>1</sup> *Menidia beryllina* (Cope) . . . Tidewater Silversides  
<sup>2/4</sup> *Menidia menidia* (Linnaeus) . . . Common Silversides  
 (Editorial note: We believe that this is a misidentification, but the specimen is available for examination whenever desired and we have let the author's idea stand).

Triglidae — Sea Robins

- <sup>1</sup> *Prionotus evolans* (Linnaeus) . . . Longwing Searobin

Batrachoididae — Toadfishes

- <sup>2</sup> *Opsanus tau* (Linnaeus) . . . Toadfish

Pleuronectidae — Flounders

- <sup>1</sup> *Citharichthys spilopterus* Gunther . . . Bigeye Spotted Flounder  
<sup>1</sup> *Paralichthys albiguttus* Jordan and Gilbert . . . Sand Flounder  
<sup>1/2</sup> *Paralichthys lethostigmus* Jordan, Gilbert . . . Southern Large Flounder

Ostraciidae — Trunkfishes

- <sup>2</sup> *Lactophrys tricornis* (Linnaeus) . . . Three-spined Cowfish

Cynoglossidae — Tonguefishes

- <sup>1</sup> *Symphurus plagiosa* (Linnaeus) . . . Oblique Tonguefish

Diodontidae — Porcupine Fishes

- <sup>1</sup> *Chilomycterus schoepfi* (Walbaum) . . . Burrfish  
<sup>1</sup> Netted by Christmas off Horn Island.  
<sup>2</sup> Caught by Richmond *et al.* from shore or in water on island.  
<sup>3</sup> Inlets on landward beach of Horn Island — Fowler (1931).  
<sup>4</sup> Identified by Fowler and deposited in the Academy of Natural Sciences of Philadelphia.

Class Amphibia — The Frogs, Toads, Salamanders

Bufonidae — Toads

- <sup>1</sup> *Bufo terrestris* Bonnaterre . . . Southern Toad

Hylidae — Tree Frogs

- Acris gryllus gryllus* Le C. . . Cricket Frog  
*Hyla cinerea* Daudin . . . Green Treefrog  
*Hyla squirella* Bosc . . . Southern Treefrog  
<sup>1</sup> Also reported by Smith and List (1955).

Class Reptilia — The Reptiles

Loricata

Crocodylidae — Alligators and Crocodiles

- Alligator mississippiensis* (Daudin) . . . Alligator

Squamata

Sauria — Lizards

Anguidae — Lizards

- <sup>1</sup> *Ophisaurus ventralis* (Linnaeus) . . . Eastern Glass Lizard

Iguanidae — Iguanas

- <sup>1</sup> *Anolis carolinensis* Voigt. . . Chameleon, Tree Lizard



Teiidae — Teiids

- <sup>1</sup> *Cnemidophorus sexlineatus* (Linnaeus) ..... Six-lined Racerunner,  
Sand Lizard

Scincidae — Skinks

- Eumeces fasciatus* (Linnaeus) ..... Five-lined Skink  
<sup>2</sup> *Scincella laterale* (Say) ..... Ground Lizard

Serpentes — Snakes

Colubridae — Common Harmless Snakes

- Coluber constrictor constrictor* Linnaeus ..... Black Racer  
*Heterodon platyrhinos* Latrille ..... Eastern Hognose Snake  
*Lampropeltis getulus holbrooki* Stejneger ..... Speckled King Snake  
*Masticophis flagellum flagellum* (Shaw) ..... Coachwhip Snake  
<sup>1</sup> *Natrix clarkii* (Baird and Girard) ..... Gulf Salt-marsh Snake  
*Natrix cyclopion cyclopion* (Dumeril and Bibron) Green Water Snake  
*Natrix sipedon confluens* (Linnaeus) .... Broad-banded Water Snake

Crotalidae — Poisonous Snakes

- Agkistrodon contortrix contortrix* (Linnaeus) ..... Copperhead  
<sup>1/2</sup> *Agkistrodon piscivorus leucostoma* (Troast) ..... Cottonmouth

Testudinata — Turtles

Chelonidae — Sea Turtles

- Chelonia mydas* (Linnaeus) ..... Green Turtle

Emydidae — Freshwater and Marsh Turtles

- Malaclemys palustris* (Gmel.) ..... Diamondback Terrapin  
<sup>1</sup> *Pseudemys concinna* (Le Conte) ..... Le Conte's Terrapin, Cooter  
<sup>1</sup> Reported also by Allen (1932).  
<sup>2</sup> Reported by Smith and List (1955).

Class Aves — The Birds

Gaviidae

- Gavia immer immer* (Brünnich) ..... Common Loon—M

Colymbidae

- <sup>1</sup> *Podilymbus podiceps podiceps* (Linnaeus) ..... Pied-billed Grebe—W

Pelecanidae

- Pelecanus erythrorhynchos* Gmelin ..... White Pelican—W  
<sup>1</sup> *Pelecanus occidentalis occidentalis* Linnaeus ... E. Brown Pelican—P

Phalacrocoracidae

- Phalacrocorax auritus auritus* (Lesson) Double-crested Cormorant—W

Anhingidae

- <sup>1</sup> *Anhinga anhinga leucogaster* (Linnaeus) ..... Water-Turkey—V

Fregatidae

- Fregata magnificens* Mathews ..... Magnificent Frigate Bird—S

#### Ardeidae

- <sup>1</sup> *Ardea herodias herodias* (Linnaeus) ..... Great Blue Heron—P  
<sup>1</sup> *Butorides virescens virescens* (Linnaeus) ..... Green Heron—S  
<sup>2</sup> *Casmerodius albus egretta* (Gmelin) ..... American Egret—P  
<sup>2</sup> *Egretta thula thula* (Molina) ..... Snowy Egret—S  
<sup>2</sup> *Hydranassa tricolor ruficollis* (Gosse) ..... Louisiana Heron—P  
<sup>2</sup> *Moris bassana* (Linnaeus) ..... Gannet—M  
<sup>2</sup> *Nyctanassa violacea violacea* (Linnaeus) Yellow-crowned Heron—M  
<sup>2</sup> *Nycticorax nycticorax hoactli* (Gmelin) ..... Black-crowned Night Heron—S

#### Anatidae

- Anas platyrhynchos platyrhynchos* (Linnaeus) .. Common Mallard—W  
*Anas rubripes rubripes* Brewster ..... Black Duck—W  
<sup>1</sup> *Branta canadensis canadensis* (Linnaeus) ..... Canada Goose—W  
<sup>2</sup> *Chen caerulescens* (Linnaeus) ..... Blue Goose—M  
<sup>2</sup> *Chen hyperborea hyperborea* (Pallas) ..... Lesser Snow Goose—M  
<sup>2</sup> *Clangula hyemalis* (Linnaeus) ..... Old-Squaw—W  
<sup>2</sup> *Dafila acuta tzitzihua* (Vieillot) ..... Pintail—W  
<sup>2</sup> *Mareca americana* (Gmelin) ..... Baldpate—W  
*Mergus serrator* Linnaeus ..... Red-breasted Merganser—W  
<sup>1</sup> *Nettion carolinense* (Gmelin) ..... Green-winged Teal—W  
*Nyroca affinis* (Eyton) ..... Lesser Scaup Duck—W  
<sup>1</sup> *Nyroca americana* (Eyton) ..... Redhead—W  
<sup>1</sup> *Nyroca marila nearctica* (Stejneger) ..... Greater Scaup Duck—W  
<sup>1</sup> *Nyroca valisineria* (Wilson) ..... Canvas-Back—W  
<sup>1</sup> *Querquedula discors* (Linnaeus) ..... Blue-winged Teal—M

#### Accipitriidae

- Circus hudsonius* (Linnaeus) ..... Marsh Hawk—W  
*Falco peregrinus anatum* Bonaparte ..... Duck Hawk—W  
*Falco sparverius sparverius* (Linnaeus) Eastern Sparrow Hawk—S  
<sup>2</sup> *Haliaeetus leucocephalus leucocephalus* (Linnaeus) S. Bald Eagle—S  
*Pandion haliaetus carolinensis* (Gmelin) ..... Osprey—S

#### Rallidae

- <sup>1</sup> *Fulica americana americana* Gmelin ..... Coot—W  
<sup>1</sup> *Ionornis martinica* (Linnaeus) ..... Purple Gallinule—P  
<sup>1</sup> *Rallus elegans elegans* Audubon ..... King Rail—P  
*Rallus longirostris saturatus* Ridgway .... Louisiana Clapper Rail—P

#### Charadriidae

- Charadrius hiaticula semipalmatus* Bonaparte . Semipalm. Plover—M  
*Charadrius melodus* Ord ..... Piping Plover—M  
<sup>1</sup> *Charadrius vociferous vociferous* (Linnaeus) ..... Killdeer—P  
*Pagolla wilsonia wilsonia* (Ord) ..... Wilson's Plover—S  
*Squatarola squatarola* (Linnaeus) ..... Black bellied Plover—M

#### Scolopacidae

- Actitis macularia* (Linnaeus) ..... Spotted Sandpiper—W  
*Capella delicata* (Ord) ..... Wilson's Snipe—W  
*Catoptrophorus semipalmatus semipalmatus* (Gmelin) .. E. Willet—S  
*Crocethia alba* (Pallas) ..... Sanderling—W  
*Ereunetes maurii* Cabanis ..... Western Sandpiper—M  
*Ereunetes pusillus* (Linnaeus) ..... Semipalmated Sandpiper—M  
*Limnodromus griseus griseus* (Gmelin) .... Short-billed Dowitcher—M

*Pelidna alpina sakhalina* (Vieillot) . . . . . Red-backed Sandpiper—W  
*Pisobia melanotos* (Vieillot) . . . . . Pectoral Sandpiper—M  
*Pisobia minutilla* (Vieillot) . . . . . Least Sandpiper—M  
*Totanus flavipes* (Gmelin) . . . . . Lesser Yellowlegs—M  
*Totanus melanoleucus* (Gmelin) . . . . . Greater Yellowlegs—M  
*Tringa solitaria solitaria* Wilson . . . . . Eastern Solitary Sandpiper—M

#### Laridae

*Chlidonias nigra surinamensis* (Gmelin) . . . . . Black Tern—M  
*Hydroprogne caspia imperator* (Coues) . . . . . Caspian Tern—W  
*Larus argentatus smithsonianus* Coues . . . . . Herring Gull—W  
<sup>1</sup> *Larus atricilla megalopterus* Bruch . . . . . Laughing Gull—P  
*Larus delawarensis* Ord . . . . . Ring-billed Gull—W  
*Larus philadelphia* (Ord) . . . . . Bonaparte's Gull—W  
*Rynchops nigra nigra* Linnaeus . . . . . Black Skimmer—S  
*Sterna antillarum antillarum* (Lesson) . . . . . Least Tern—S  
*Sterna forsteri* Nuttall . . . . . Forster's Tern—M  
<sup>1</sup> *Sterna hirundo hirundo* Linnaeus . . . . . Common Tern—W  
*Thalasseus maximus maximus* Boddaert . . . . . Royal Tern—V

#### Columbidae

*Zenaidura macroura carolinensis* (Linnaeus) . . . . . E. Mourning Dove—P

#### Cuculidae

*Coccyzus americanus americanus* (Linnaeus) . . . . . Yellow-billed Cuckoo—S  
*Coccyzus erythrophthalmus* (Wilson) . . . . . Black-billed Cuckoo—M

#### Caprimulgidae

*Chordeiles minor chapmani* Coues . . . . . Florida Nighthawk—S

#### Alcedinidae

*Megasceryle alcyon alcyon* (Linnaeus) . . . . . Eastern Belted Kingfisher—P

#### Picidae

*Colaptes auratus* Linnaeus . . . . . Flicker—P  
*Sphyrapicus varius varius* (Linnaeus) . . . . . Yellow-bellied Sapsucker—W

#### Tyrannidae

*Myiarchus crinitus crinitus* (Linnaeus) . . . . . S. Crested Flycatcher—S  
*Myiochanes virens* (Linnaeus) . . . . . Eastern Wood Pewee—S  
*Sayornis phoebe* (Latham) . . . . . Eastern Phoebe—W  
*Tyrannus tyrannus* (Linnaeus) . . . . . Eastern Kingbird—S

#### Hirundinidae

*Hirundo erythrogaster* (Boddaert) . . . . . Barn Swallow—M  
*Iridoprocne bicolor* (Vieillot) . . . . . Tree Swallow—W

#### Sittidae

*Sitta canadensis* Linnaeus . . . . . Red-breasted Nuthatch—W

#### Certhiidae

*Carthia familiaris americana* Bonaparte . . . . . Brown Creeper—W

#### Troglodytidae

*Cistothorus stellaris* (Naumann) . . . . . Short-billed Marsh Wren—W  
*Thryothorus ludovicianus* (Latham) . . . . . Carolina Wren—P  
*Troglodytes aedon baldwini* Oberholser . . . . . Ohio House Wren—W

#### Mimidae

- <sup>1</sup> *Dumetella carolinensis* (Linnaeus) ..... Catbird—W  
*Mimus polyglottos polyglottos* (Linnaeus) . Eastern Mockingbird—P

#### Turdidae

- Hylochichla fuscescens fuscescens* (Stephens) ..... Veery—M  
*Hylocichla guttata faxonii* Bangs & Penard . E. Hermit Thrush—W  
*Hylocichla mustelina* (Gmelin) ..... Wood Thrush—M  
*Hylocichla ustulata swainsoni* (Tschudi) . . . Olive-backed Thrush—M  
*Sialia sialis sialis* (Linnaeus) ..... Eastern Bluebird—P  
*Turdus migratorius migratorius* Linnaeus ..... Eastern Robin—W

#### Sylviidae

- Corthylio calendula calendula* (Linnaeus) E. Ruby-crown. Kinglet—W  
*Poliophtila caerulea caerulea* (Linnaeus) Blue-gray Gnatcatcher—S  
*Regulus satrapa satrapa* Lichtenstein E. Golden-crown. Kinglet—W

#### Motacillidae

- Anthus spinoletta rubescens* (Tunstall) ..... American Pipit—W

#### Bombycillidae

- Bombycilla cedrorum* Vieillot ..... Cedar Waxwing—W

#### Laniidae

- Lanius ludovicianus ludovicianus* (Linnaeus) . Loggerhead Shrike—P

#### Vireonidae

- <sup>1</sup> *Vireo flavifrons* (Vieillot) ..... Yellow-throated Vireo—S  
*Vireo griseus griseus* (Boddaert) ..... White-eyed Vireo—S  
*Vireo olivaceus* (Linnaeus) ..... Red-eyed Vireo—S

#### Compsothlypidae

- Compsothlypis americana* (Linnaeus) ..... Parula Warbler—M  
*Dendroica aestiva* (Gmelin) ..... Yellow Warbler—M  
*Dendroica castanea* (Wilson) ..... Bay-breasted Warbler—M  
*Dendroica coronata* (Linnaeus) ..... Myrtle Warbler—W  
*Dendroica discolor discolor* (Vieillot) Northern Prairie Warbler—M  
*Dendroica magnolia* (Wilson) ..... Magnolia Warbler—M  
*Dendroica palmarum hypochrysea* Ridgway . Yel. Palm Warbler—W  
*Dendroica pinus pinus* (Wilson) ..... Northern Pine Warbler—P  
*Dendroica striata* (Forster) ..... Black-poll Warbler—M  
*Dendroica virens virens* (Gmelin) Black-throated Green Warbler—M  
*Geothlypis trichas* (Linnaeus) ..... Yellow-throat—P  
*Mniotilta varia* (Linnaeus) ..... Black-and-white Warbler—M  
*Protonotaria citrea* (Boddaert) ..... Prothonotary Warbler—M  
*Seiurus auricapillus* (Linnaeus) ..... Ovenbird—M  
*Seiurus noveboracensis noveboracensis* (Gmelin) N. Water-thrush—M  
*Setophaga ruticilla tricolora* (Linnaeus) .... American Redstart—M

#### Icteridae

- Agelaius phoeniceus littoralis* Howell and Van Rossem .....  
 Gulf Red-wing—P  
*Cassidix mexicanus major* (Vieillot) ..... Boat-tailed Grackle—P  
*Dolichonyx oryzivorus* (Linnaeus) ..... Bobolink—M

#### Fringillidae

- Ammospiza maritima howelli* (Griscom, Nichols) Howell's Sparrow—P  
<sup>1</sup> *Junco hyemalis hyemalis* (Linnaeus) . . . . . Slate-colored Junco—W  
*Melospiza georgiana* (Latham) . . . . . Swamp Sparrow—W  
*Melospiza melodia* (Wilson) . . . . . Song Sparrow—W  
<sup>1</sup> *Passerina cyanea* (Linnaeus) . . . . . Indigo Bunting—M  
*Spizella pusilla pusilla* (Wilson) . . . . . Eastern Field Sparrow—W

- P — Permanent resident.  
 S — Summer resident.  
 V — Summer visitant.  
 W — Winter resident  
 M — Migrant.

- <sup>1</sup> — Additions to Burleigh and Pessin List of 1941 by Richmond (this paper).  
<sup>2</sup> — Additions to Burleigh and Pessin List of 1941 by John R. Walther (unpublished).

#### Class Mammalia — The Mammals

##### Delphinidae — Dolphins and Porpoises

- Tursiops truncatus* (Montague) . . . . . Atlantic Bottle-nosed Dolphin

##### Leporidae — Hares and Rabbits

- Sylvilagus aquaticus littoralis* Nelson . . . . . Coast Swamp Rabbit  
*Sylvilagus floridanus mallurus* (Thomas) . . . . . Eastern Cottontail

##### Muridae —Rats

- Mus norvegicus norvegicus* (Erxleben) Norway, Common, Brown Rat

##### Procyonidae — Raccoons

- Procyon lotor varius* Nelson & Goldman . . . . . Raccoon

### FLORA

#### Pinaceae

- Pinus Elliottii* Engelm. . . . . Slash Pine, Swamp Pine  
<sup>2</sup> *Pinus clausa* (Engelm.) Vasey . . . . . Spruce-Pine, Sand-Pine

#### Typhaceae

- Typha angustifolia* L. . . . . Narrow-leaved Cattail

#### Potamogetonaceae

- Ruppia maritima* L. . . . . Ditch-grass

#### Alismataceae

- Alisma subcordatum* Raf. . . . . Waterplantain  
*Sagittaria mohrii* Sm. J. G. . . . . Arrowhead

#### Hydrocharitaceae

- Thalassia testudinum* Koenig+Sims . . . . . Turtle-grass  
*Halophila engelmannii* Ascher . . . . . Tape-grass

### Gramineae

	<i>Andropogon glomeratus</i> (Walt.) B. S. P.	Broom-grass
<sup>3/1</sup>	<i>Aristida longespica</i> Poir.	Three-awn Grass
	<i>Cenchrus incertus</i> M. A. Curtis	Southern Sandbur, Burr-grass
<sup>2</sup>	<i>Chloris petraea</i> Swartz	Finger-grass
<sup>3</sup>	<i>Digitaria serotina</i> (Walt.) Michx.	
	<i>Echinochloa Walteri</i> (Pursh) Nash	Walter's Echinochloa
<sup>3/1</sup>	<i>Eragrostis Elliottii</i> S. Wats.	Love-grass
<sup>2</sup>	<i>Panicum amarum</i> Ell.	
<sup>3</sup>	<i>Panicum crus-galli</i> L.	Barnyard-grass
<sup>3/1</sup>	<i>Panicum nitidum</i> Lam.	Panic-grass
<sup>3/1</sup>	<i>Panicum oligosanthos</i> Schultes	Panic-grass
<sup>1</sup>	<i>Panicum repens</i> L.	Panic-grass
<sup>1</sup>	<i>Panicum tenerum</i> Beyr.	Panic-grass
<sup>2</sup>	<i>Paspalum floridanum</i> Michx.	Florida Paspalum
<sup>3</sup>	<i>Paspalum membraeum</i> Walt.	Walter's Paspalum
<sup>3</sup>	<i>Paspalum setaceum longependunculatum</i> (LeConte)	Long-peduncled Paspalum
<sup>1</sup>	<i>Paspalum vaginatum</i> Swartz	Salt Joint-grass
<sup>3</sup>	<i>Setaria glauca</i> (L.) Beauv.	Glaucous Foxtail
<sup>1</sup>	<i>Setaria magna</i> Griseb.	Giant Foxtail
	<i>Spartina alterniflora</i> Loisel.	Saltmarsh Cord Grass
	<i>Spartina patens monogyna</i> (M. A. Curtis) Fern.	White-rush
<sup>3/1</sup>	<i>Sporobolus vaginiflorus</i> (Torr.) Wood	Drop-seed, Poverty Grass
	<i>Sporobolus virginicus</i> (L.) Kunth	Virginia Rush-grass
	<i>Uniola paniculata</i> L.	Sea Oats

### Cyperaceae (Sedges)

<sup>3/1</sup>	<i>Bulbostylis ciliatifolia</i> (Ell.) C. Mohr.	Ciliate-leaved Sedge
<sup>2</sup>	<i>Cyperus Haspan</i> L.	Haspan Sedge, Sheathed Cyperus
<sup>1</sup>	<i>Cyperus Lecontei</i> Torr.	Golden Sedge
<sup>3</sup>	<i>Dichromena colorata</i> (L.) Hitchc.	White-tuft, Star-rush
<sup>3</sup>	<i>Eleocharis albida</i> Torr.	Spike-rush
<sup>3</sup>	<i>Eleocharis cellulosa</i> Torr.	Cellular Spikerush
<sup>3</sup>	<i>Fimbristylis autumnalis</i> (L.) Roem.+Schult.	Autumnal Sedge
<sup>2</sup>	<i>Fimbristylis castanea</i> Michx. Vahl	Chestnut-colored Sedge
<sup>1</sup>	<i>Fimbristylis Harperi</i> Britton	Harpers' Sedge
<sup>1</sup>	<i>Mariscus jamaicensis</i> (Crantz) Britt.	Saw-Grass
<sup>3/1</sup>	<i>Psilocarya corymbifera</i> (C. Wright) Britt.	Baldrush
<sup>3/1</sup>	<i>Rhynchospora cymosa</i> (Willd.) Ell.	Beakrush
<sup>2</sup>	<i>Rhynchospora intermixta</i> C. Wright	Beakrush
<sup>3/1</sup>	<i>Rhynchospora microcarpa</i> Baldw.	Beakrush

### Palmaceae (Arecaceae)

	<i>Sabal glabra</i> (Mill.) Sarg.	Dwarf Palmetto
	<i>Serenoa repens</i> (Bartr.) Small	Saw-palmetto

### Xyridaceae

<sup>3/1</sup>	<i>Xyris caroliniana</i> Walt.	Carolinian Yellow-eyed Grass
<sup>2</sup>	<i>Xyris elata</i> Chapm.	Yellow-eyed Grass
	<i>Xyris Elliottii</i> Chapm.	Elliott's Yellow-eyed Grass
<sup>3/1</sup>	<i>Xyris torta</i> J. E. Sm.	Twisted Yellow-eyed Grass

Commelinaceae

- <sup>2</sup> *Commelina angustifolia* Michx. .... Narrow-leaved Dayflower  
*Commelina erecta angustifolia* (Michx.) Fern .... Narrow-leaved  
Dayflower

Juncaceae

- Juncus robustus* (Engelm.) Cov. .... Common Reed  
<sup>1</sup> *Juncus roemerianus* Scheele .... Black Rush  
<sup>2</sup> *Juncus scirpoides* Lam. .... Scirpoid Rush

Liliaceae

- Smilax auriculata* Walt. .... Catbrier, Wild Bamboo  
<sup>1</sup> *Smilax bona-nox* L. .... China brier

Iridaceae

- Sisyrinchium* sp. .... Blue-eyed Grass

Orchidaceae

- Spiranthes* sp. .... Ladies'-Tresses

Myricaceae

- Myrica cerifera* L. .... Wax-myrtle, Candleberry

Fagaceae

- Quercus virginiana geminata* Sarg. .... Live Oak

Polygonaceae

- <sup>2</sup> *Delopyrum gracile* (Nutt.) .... Small Jointweed  
*Polygonella gracilis* Meisn. .... Slender Jointweed  
<sup>2</sup> *Polygonum punctatum* Ell. .... Water-smartweed

Chenopodiaceae

- Atriplex arenaria* Nutt. .... Seabeach Orach  
<sup>2/1</sup> *Salsola Kali* L. .... Goosefoot Saltwort

Amaranthaceae

- <sup>2</sup> *Froelichia floridana* (Nutt.) Moq. .... Cottonweed

Batidaceae

- <sup>2</sup> *Batis maritima* L. .... Saltwort, Beachwort

Caryophyllaceae

- Odontonychia carymbosa* Small .... Whitlow Wort  
<sup>2</sup> *Stipulicida setacea* Michx. .... Chickweed

Ceratophyllaceae

- Ceratophyllum demersum* L. .... Hornwort

Nymphaeaceae

- Cabomba caroliniana* Gray .... Cabomba  
*Nymphaea tuberosa* Paine .... Water Lily

Magnoliaceae

- Magnolia grandiflora* L. .... Southern Magnolia

Capparidaceae

- <sup>2</sup> *Aldenella tenuifolia* (T. & G.) Greene .... Caper

Cruciferae

- Cakile edentula* (Bidel.) Hook. .... Cakile

<b>Droseraceae</b>	
<i>Drosera capillaris</i> Poir. ....	Pink-sundew
<b>Rosaceae</b>	
<i>Rosa</i> sp. ....	Wild Rose
<i>Rubus trivialis</i> Michx. ....	Southern Dewberry
<b>Leguminosae</b>	
<i>Chamaecrista littoralis</i> Pollard ....	Sensitive Pea
<i>Crotalaria Purshii</i> D. C. ....	Pursh's Rattlebox
<i>Crotalaria sagittalis</i> L. ....	Arrowhead Rattlebox
<i>Desmodium tenuifolium</i> (T. & G.) Ktze. ....	Tick-trefoil
<sup>2</sup> <i>Indigofera caroliniana</i> Mill. ....	Carolina Indigo
<sup>1</sup> <i>Sesban emerus</i> (Aubl.) Britton & Wilson ....	Sesban
<b>Meliaceae</b>	
<i>Melia azedarach</i> L. ....	China-berry, China-tree
<b>Euphorbiaceae</b>	
<i>Croton punctatus</i> Jacq. ....	Silver-leaf Croton, Beach Tea
<b>Empetraceae</b>	
<sup>3</sup> <i>Ceratiola ericoides</i> Michx. ....	Rosemary, Heather-like Ceratiola
<b>Anacardiaceae</b>	
<i>Rhus copallina</i> L. ....	Dwarf Sumac
<sup>1</sup> <i>Toxicodendron Toxicodendron</i> (L.) Britton ....	Poison Ivy
<b>Aquifoliaceae</b>	
<sup>3</sup> <i>Ilex vomitoria</i> Ait. ....	Yaupon
<b>Malvaceae</b>	
<sup>1</sup> <i>Hibiscus moscheutos</i> L. ....	Swamp Marsh-mallow
<b>Guttiferae</b>	
<i>Sarothra gentianoides</i> L. .	Pinweed, Orange-grass, St.-Johns-wort
<b>Cistaceae</b>	
<i>Lechea minor</i> L. ....	Pinweed, Thyme-leaved Lechea
<sup>1/3</sup> <i>Lechea Torreyi</i> Leggett ....	Torrey's Pinweed
<b>Violaceae</b>	
<i>Viola primulaefolia</i> L. ....	Primrose-leaved Violet
<b>Cactaceae</b>	
<sup>1</sup> <i>Opuntia drummondii</i> Graham ....	Drummond's Prickly Pear
<i>Opuntia humifusa</i> Raf. ....	Rafinewque's Prickly Pear
<b>Elaeagnaceae</b>	
<i>Elaeagnus multiflorus</i> Thunb. ....	Japanese Cherry
<b>Lythraceae</b>	
<sup>3/1</sup> <i>Lythrum lineare</i> L. ....	Linear-leaved Loosestrife
<b>Melastomataceae</b>	
<i>Rhexia cubensis</i> Griseb. ....	Meadowbeauty
<sup>2</sup> <i>Rhexia mariana</i> L. ....	Maryland Meadowbeauty
<b>Onagraceae</b>	
<sup>2</sup> <i>Ludvigia maritima</i> Harper ....	Evening Primrose



- Holoragidaceae**
- Myriophyllum proserpinacoides* Gill ..... Parrott's Feather
- Umbelliferae**
- Hydrocotyle Bonariensis* Lam. .... Pennywort
- Ericaceae**
- Vaccinium* sp. .... Blueberry
- Primulaceae**
- Anagallis arvensis* L. .... Common Pimpernel
- Loganiaceae**
- Polypremum procumbens* L. .... Procumbent Polypremum
- Gentianaceae**
- Sabatia stellaria* Pursh ..... Sea-pink, Marsh-pink
- <sup>2</sup> *Sabatia stellaris* Pursh forma *albiflora* Britt ..... White Flowered Marsh-pink
- Asclepiadaceae**
- <sup>2</sup> *Asclepias humistrata* Walt. .... Walter's Milkweed
- <sup>2</sup> *Metastelma palustris* (Vail) ..... Vine Milkweed
- Convolvulaceae**
- Cuscuta* sp. .... Dodder, Love Vine
- Ipomoea Pes-Caprae* (L.) Sweet ..... Railroad Vine
- <sup>2</sup> *Ipomoea stolonifera* (Cyril.) Poir. .... Seaside Morning-glory
- Polemoniaceae**
- Gilia rubra* (L.) Heller ..... Spanish-larkspur, Standing-cypress
- Verbenaceae**
- Lippia nodiflora* Michx. .. Capeweed, Spatulate-leaved Frog Fruit
- Solanaceae**
- <sup>3/1</sup> *Physalis angustifolia* Nutt. .... Narrow-leaf Seaside Groundcherry
- Scrophulariaceae**
- Bacopa Monnieri* (L.) Pennell ..... Monnier's Waterhyssop
- <sup>2</sup> *Sophronanthe* (Gratiola) *hispida* Benth. .. Rough Hedgehyssop
- Bigoniaceae**
- <sup>1</sup> *Bignonia radicans* L. .... Trumpet creeper
- Rubiaceae**
- Cephalanthus occidentalis* L. .... Buttonbush, Button Willow
- Diodia teres* Walt. .... Buttonweed, Purple Button Flower
- <sup>1</sup> *Oldenlandia fasciculata* (Bertol.) Small ..... Oldenlandia

#### Compositae

<i>Adinospermum angustifolium</i> (Pursh) T. & G. ....	Thistle
<i>Ambrosia artemisiaefolia</i> L. ....	Hogweed, Ragweed
<i>Baccharis halimifolia</i> L. ....	Groundsell Tree
<i>Chondrophora nudata</i> (Michx.) Britton ....	Rayless Goldenrod
<i>Chrysoma pauciflosculosa</i> (Michx.) Greene ....	Few-flowered Goldenrod
<i>Chrysopsis scabrella</i> T & G. ....	Beach Golden Aster
<i>Eclipta alba</i> (L.) Hassk. Yerba-de-Tago, White Flowered Eclipta	
<sup>2</sup> <i>Eupatorium recurvans</i> Small ....	Recurring Eupatorium
<i>Heterotheca subaxillaris</i> (Lam.) Britt & Rusby ....	Camphorweed
<i>Iva frutescens</i> L. ....	Shrubby Marsh-elder
<i>Iva imbricata</i> Walt. ....	Seaside Marsh-elder
(Collected by Schuster, R. M., 1951)	
<i>Krigia virginica</i> (L.) Willd. ....	Dwarf-Dandelion
<i>Mikania scandens</i> (L.) ....	Climbing Hempweed
<sup>3</sup> <i>Pluchea camphorata</i> (L.) DC. ....	Saltmarsh Fleabane
<i>Pluchea foetida</i> (L.) DC. ....	Viscid Pluchea
<sup>1</sup> <i>Solidago sempervirens mexicana</i> (L.) Fern. ....	Seaside Goldenrod

<sup>1</sup> Plants listed by Pessin and Burleigh (1941).

<sup>2</sup> Plants collected by Channell (1951-60).

<sup>3</sup> Plants listed by Lowe (1921).

Unnumbered species collected by Richmond (1944-1961), and deposited in the Bailey Herbarium at Cornell University, Ithaca, N. Y.

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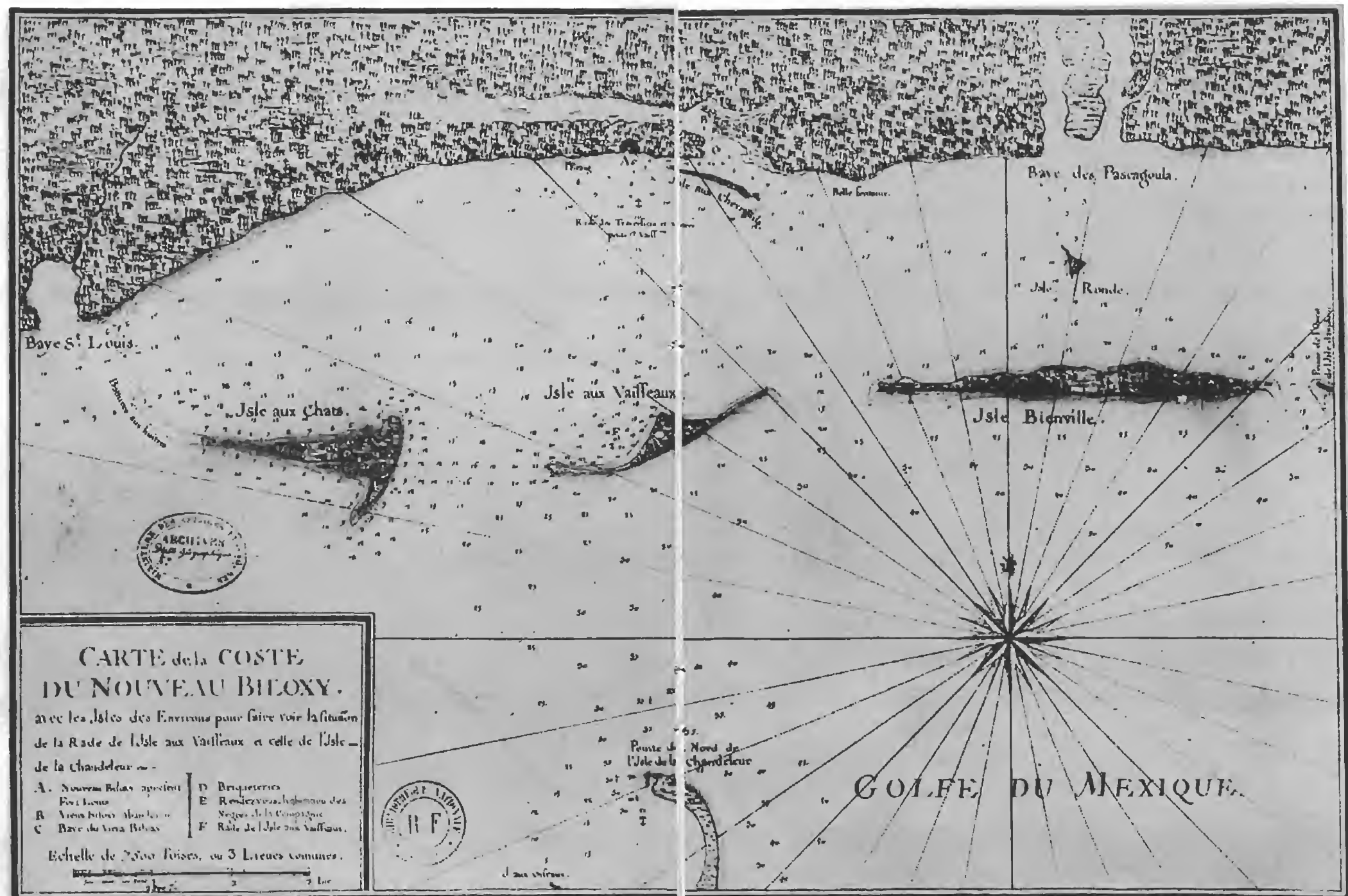


Fig. 1. 1-A. Carte de la Coste du Nouveau Biloxi avec les Isles des Environs pour faire voir la situation de la Rade de l'Isle aux Vaisseaux et celle de l'Isle-de la Chandeleur. A. Nouveau Biloxi à present Fort Louis; B. Vieux Biloxi abandonné; C. Baye du Vieux Biloxi; D. Briqueteries; E. Rendezvous habitation

des - Negres de la Compagnie; F. Rade de l'Isle aux Vaisseaux; Echelle de 7500 Toises, ou 3 Lieues' Communes—1 inch about 73¼ miles—Map Div. March 29, 1927 (Library of Congress); J. aux Oiseaux.



1-B. Portion of Jean Baptiste Bourguignon d'Anville's "Carte de la Louisiane dressée in Mai 1732, publiée en 1752." (Original in the Library of Congress).

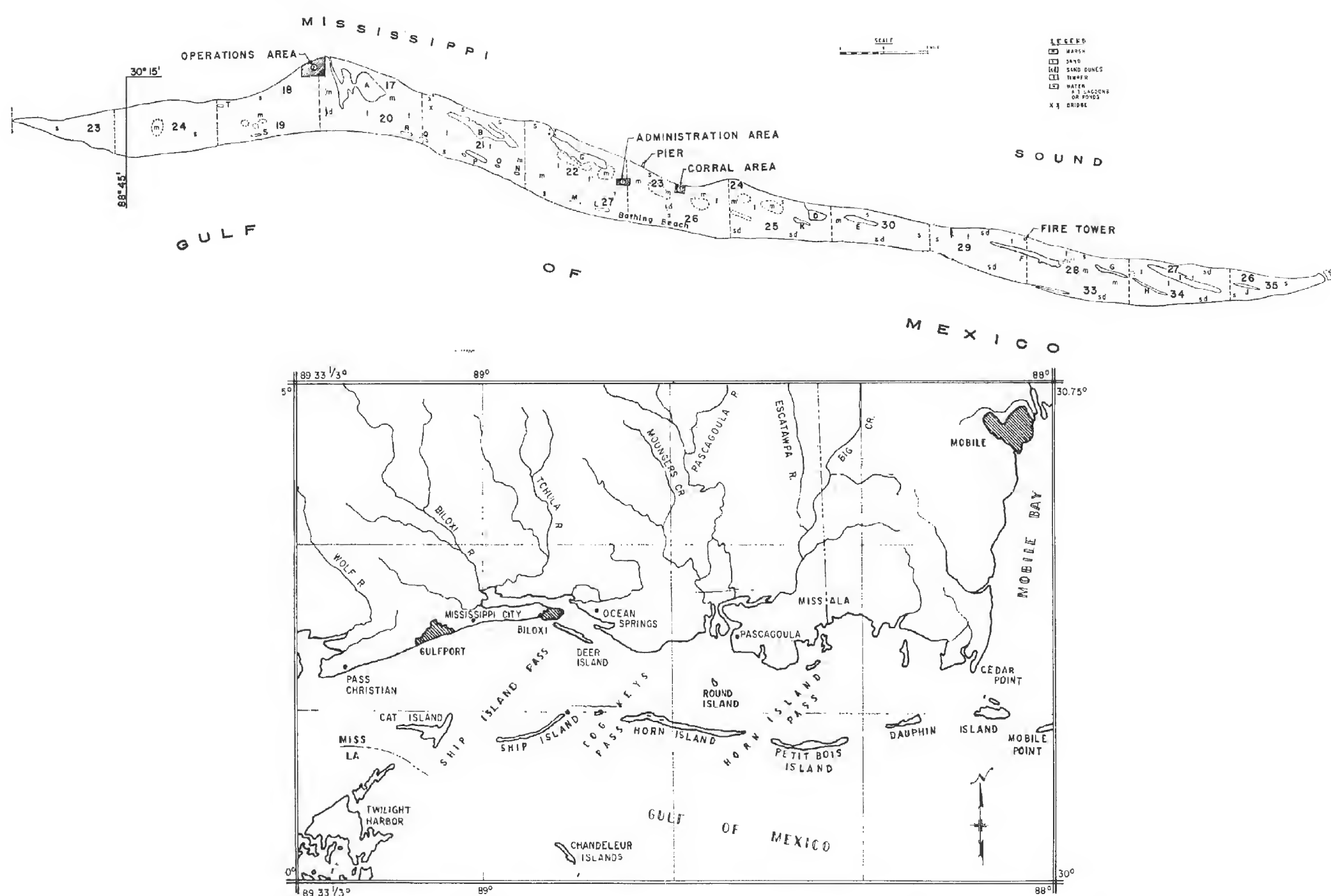


Fig. 2. Horn Island map in detail (1944) with an insert showing the relationship of the island to the mainland and to the other barrier islands of the Sound. The insert is a portion of a strategic map of the War Department, Corps of Engineers, U. S. Army (Mobile Sheet); Army Map Service, Washington, D. C.; No. 100, 393, 1940 (1st Edition - AMS 1), Works Projects Administration Project. Main map adapted by Richmond from a topographic map, Edition 1942, Surveyed by J. A. McKeon in 1941. United States Dept. of the Interior, Geological Survey, Miss. (Jackson Co.), Horn Island Quadrangle (15 minute series). The numbers refer to a section or one square mile (640 acres). The section numbers referred to in the descriptions of the photographs designate the numbers used in Fig. 2.

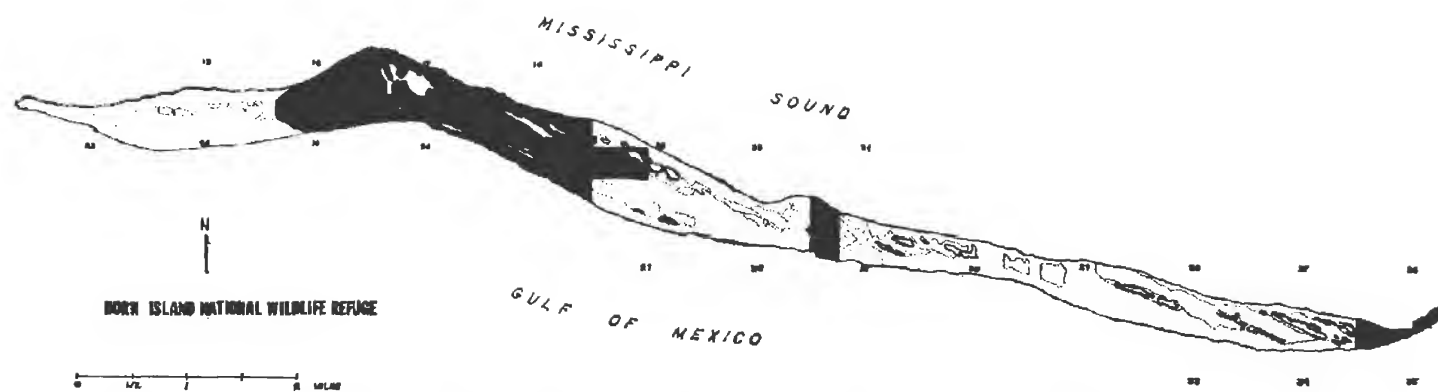


Fig. 3. Horn Island map showing the "Horn Island National Wildlife Refuge" and private property areas. Private property shown in black and the Refuge in white. However, ponds within the black areas are white and are owned privately. (Courtesy of John R. Walther).





Fig. 4. Sound shoreline near the "Horseshoe" from a trawler (Hermes).



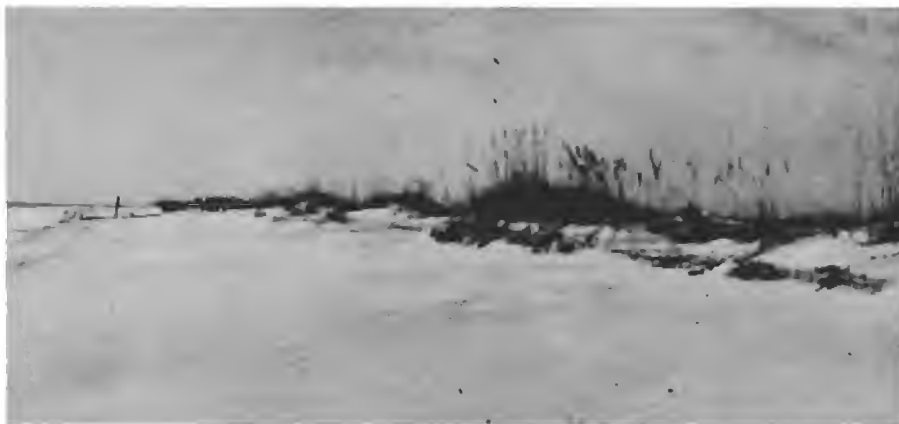
Fig. 5. Treeline on the Sound side. Close-up of a portion of Fig. 4.



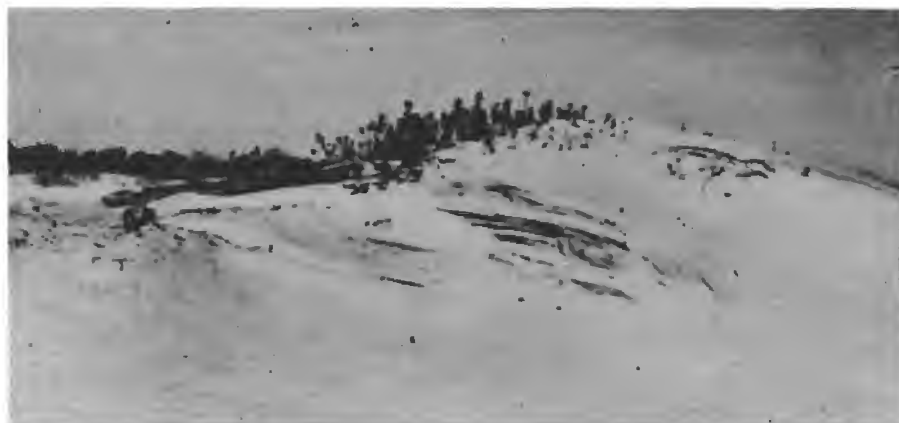
Fig. 6. Gulf shore west along bathing beach.



*Fig. 7. Gulf shore east along bathing beach.*



*Fig. 8. Gulf shore looking west from bathing beach showing some tall sea oats.*



*Fig. 9. Gulf side looking northwest from bathing beach showing dunes with sea oats in rear to the left.*



Fig. 10. Young slash pine (*Pinus Elliottii* Engelm.) just north of bathing beach.



Fig. 12. A portion of the north side of Lagoon C showing a stand of *Juncus roemerianus* Scheele and broomgrass. Oysters can be seen in the center of this photograph.

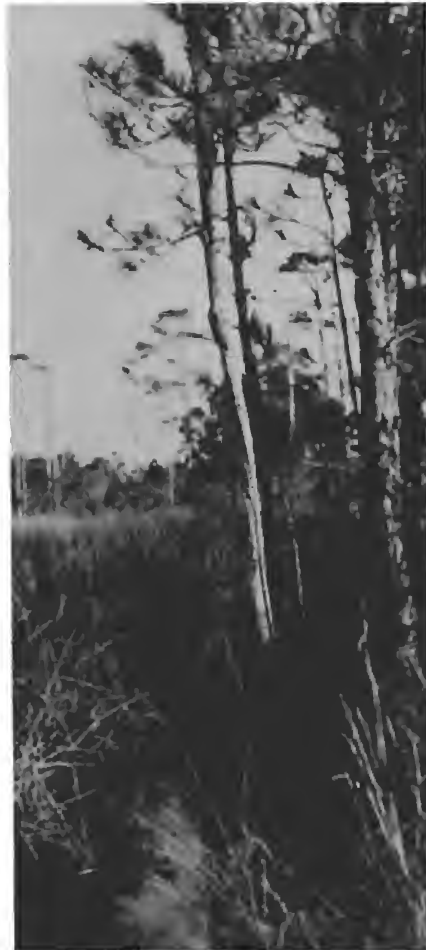


Fig. 20. Typical swamp in the center of the island filled with black rushes, broomgrass, and cattails.

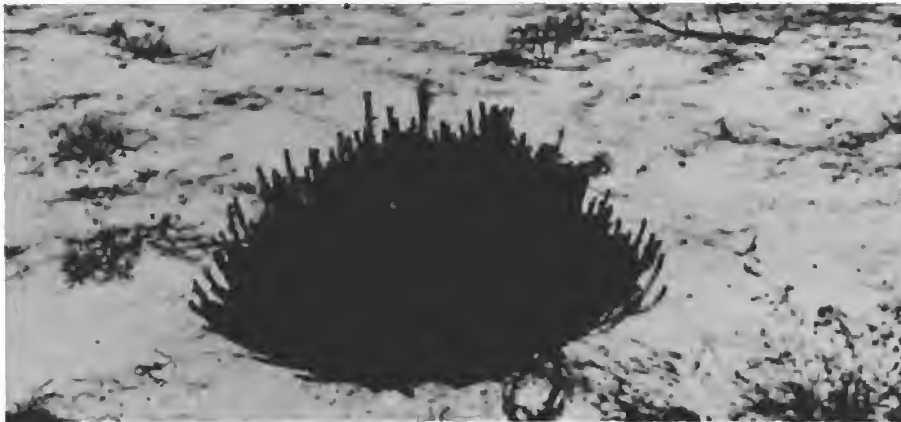


Fig. 11. Rosemary (*Ceratiola ericoides* Michx.) just north of bathing beach.



Fig. 13. The narrow-leaved cattail (*Typha angustifolia* L.) borders the southern side of Lagoon C just to the north of the pine grove.



Fig. 14. Lagoon A looking to the north to the Sound.



Fig. 15. North of the bathing beach where several species of shore birds nest.



Fig. 16. Lagoon D bordered with black rushes.



Fig. 17. Marshy ponds M and S looking southeast from the western part of the island. Black rushes abound.



Fig. 18. Swampy area amongst pine timber in the center of the island.



Fig. 19. Swampy hole near the center of the island.



Fig. 21. Clump of live oaks (*Quercus virginiana geminata* Sargent) with scattered slash pines. Palmettos in the foreground. About two miles from the east end close to the Sound.



*Fig. 22. Same area as Fig. 21 but close-up photograph.*



*Fig. 23. Pine grove looking east from the administration area.*



*Fig. 24. Similar view of Fig. 23 after a heavy rain.*



Fig. 25. Swampy land near Section 26.



Fig. 26. Rosemary shrubs (center of photograph) with scattered clumps of small groundsell plants (*Baccharis halimifolia* L.) throughout. Section 25 area.



Fig. 27. Close-up of the cottonmouth (*Agkistrodon piscivorus* (Troast)). Marsh near Section 24.